

CITY OF NEWTON, MASSACHUSETTS

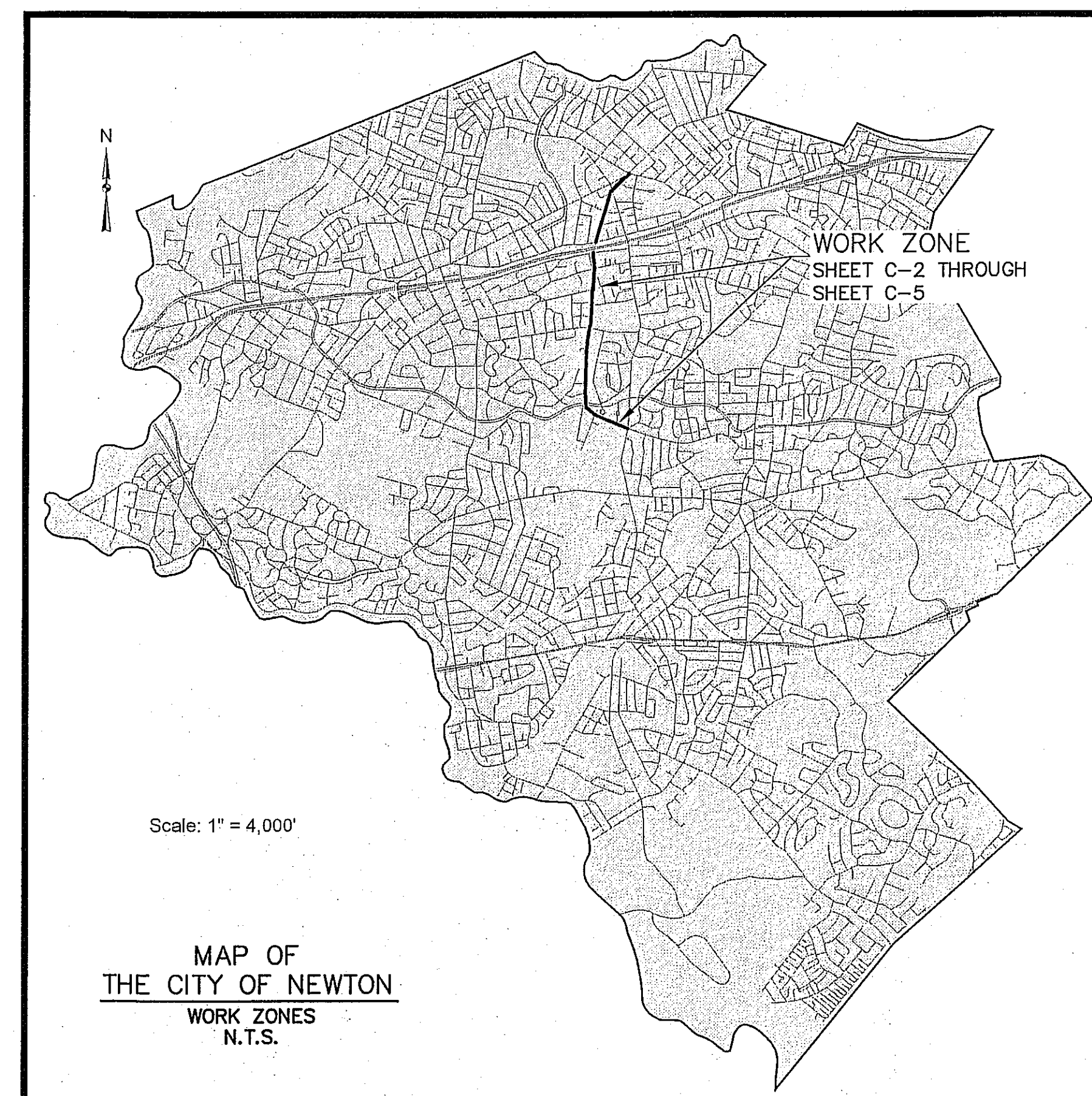
WATER MAIN REHABILITATION AT HOMER STREET AND LOWELL AVENUE

BID NO. 12-83

PLAN NO. N84-38909



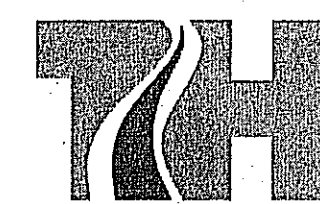
NEWTON CITY HALL
1000 COMMONWEALTH AVENUE
NEWTON CENTRE, MA 02459



LOCUS MAP

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GENERAL PROCESS AND CONSTRUCTION NOTES:

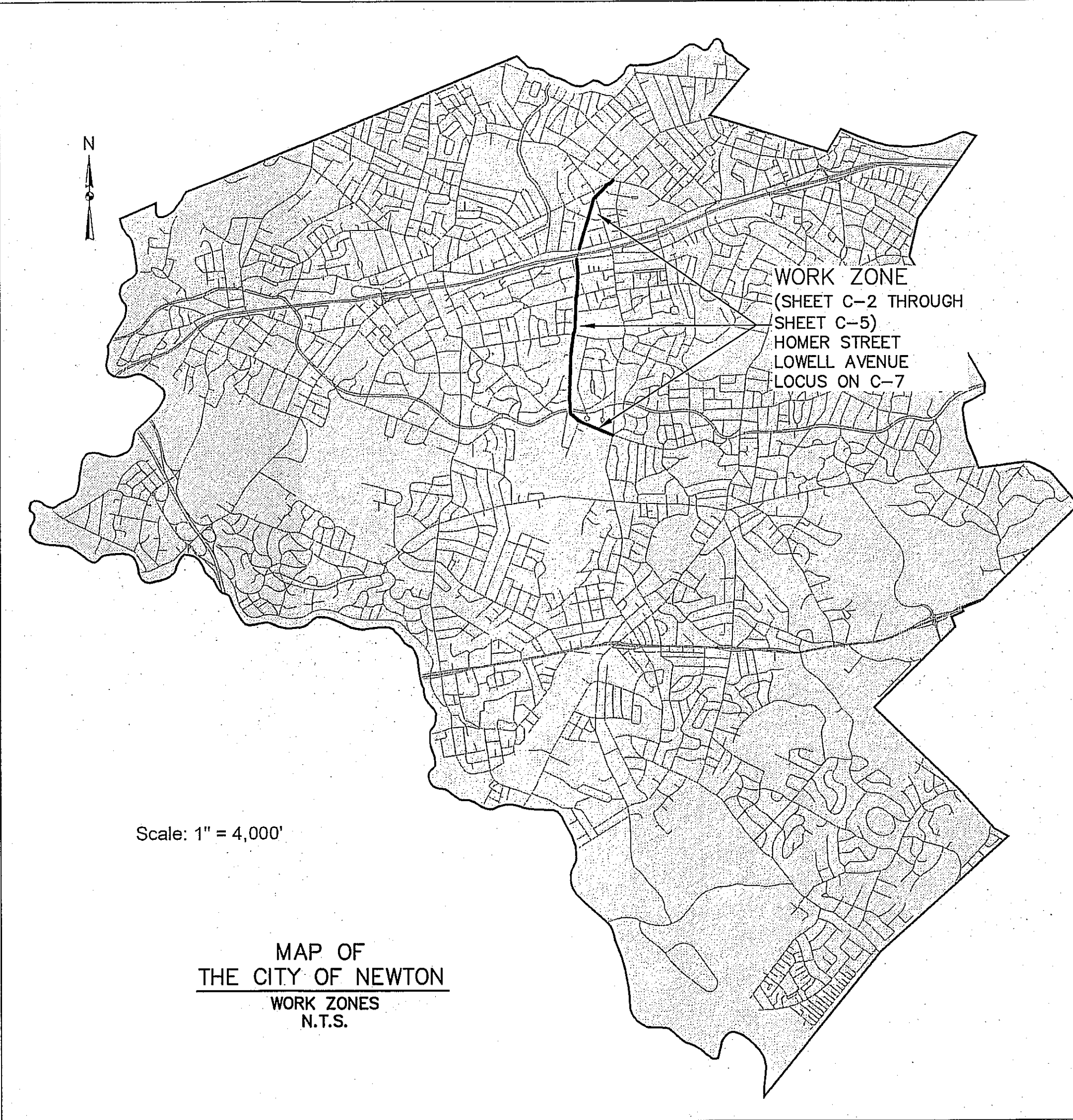
1. THE LOCATION OF THE EXISTING UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE AND ARE INTENDED ONLY TO ADVISE THE CONTRACTOR OF THEIR PRESENCE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING THE ACTUAL LOCATIONS OF ALL EXISTING UTILITIES, INCLUDING SEWER, AND DRAIN LINE LOCATIONS.
2. ALL BENDS, TEES, CAPS AND HYDRANTS SHALL BE BACKED WITH CONCRETE THRUST BLOCKS AS INDICATED IN THE CONTRACT DRAWINGS. MEGALUGS ARE TO BE INSTALLED ON ALL BENDS, VALVES AND TEES.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF NEWTON. ALL EXCAVATION AND RESTORATION SHALL MEET CITY SPECIFICATIONS. A CITY STREET OPENING PERMIT AND TRENCH OPENING PERMIT (APPLICATION FEES WAIVED) WILL BE REQUIRED FOR ALL WORKS WITHIN THE PROJECT AREA PRIOR TO ANY CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL REQUIREMENTS OF THE ABOVE MENTIONED PERMITS. PURSUANT TO M.G.L. CHAPTER 82A:1, 520 CMR 7.00 AND 520 CMR 14.00, ALSO IN ACCORDANCE WITH SUMMARY OF 1926 SUBPART P - OSHA EXCAVATION STANDARD THE CONTRACTOR IS RESPONSIBLE FOR THE FILING OF AND FULLY MEETING THE REQUIREMENTS OF THE NEWLY ADOPTED TRENCH PERMIT.
4. THE CONTRACTOR SHALL MAINTAIN A MINIMUM CLEARANCE BETWEEN THE NEW WATER MAIN AND OTHER EXISTING UTILITIES OF AT LEAST 18-INCHES. ANY WATER MAIN OR SERVICE WITHIN 10 FEET HORIZONTALLY AND 18 INCHES VERTICALLY OF A SEWER LINE OR STRUCTURE SHALL BE ENCASED IN CONCRETE.
5. ALL WATER PIPES ARE TO BE LAID WITH A MINIMUM OF 5'-0" COVER, EXCEPT AS INDICATED OTHERWISE IN THE CONTRACT DRAWINGS.
6. NEW WATER MAINS MUST PASS A CHLORINATION TEST AND A PRESSURE TEST BEFORE WATER SERVICES ARE TIED OVER.
7. THE CONTRACTOR AT HIS EXPENSE SHALL PROVIDE ADDITIONAL TAPS AS NECESSARY FOR THE CHLORINATING AND HYDROSTATIC TESTING. TAPS SHALL BE CAPPED AFTER TESTING IS COMPLETE.
8. ALL EXISTING WATER SERVICES THAT ARE NOT OF COPPER MATERIAL ARE TO BE REPLACED BY THE CITY OF NEWTON. ALL EXISTING WATER MAINS SHALL REMAIN IN PLACE AND WILL BE TIED OVER TO THE NEW WATER MAIN WITH A NEW CORPORATION, NEW SERVICE TUBING, AND NEW COUPLING.
9. AND IN ACCORDANCE WITH THE CONTRACT DRAWINGS, NEW SERVICES ARE SHOWN ON PLANS NEXT TO EXISTING SERVICES FOR CLARITY. NEW SERVICES ARE TO BE INSTALLED IN EXISTING WATER SERVICE TRENCH, UNLESS OTHERWISE APPROVED BY THE ENGINEER. ALL ABANDONED SERVICES ARE TO BE SHUT OFF AT THE CORPORATION AT THE TIME OF THE NEW TIE OVER. ALL EXISTING COPPER WATER SERVICES SHALL REMAIN IN-PLACE AND WILL BE TIED OVER TO THE NEW WATER MAIN WITH A NEW CORPORATION, NEW SERVICE TUBING, AND NEW COUPLING.
10. THE HOUSE SERVICE CONNECTIONS SHALL BE COMPLETED AFTER THE NEW WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED AND APPROVED.
11. ALL VALVES ON ABANDONED WATER MAINS SHALL BE CUT OUT AND REMOVED.
12. REMOVE ALL EXISTING HYDRANTS AND CAP BRANCH WHEN NEW WATER MAINS ARE IN SERVICE UNLESS OTHERWISE NOTED. DELIVER UP TO TEN (10) REMOVED HYDRANTS TO CITY OF NEWTON STOCK YARD AT 60 ELLIOT STREET.
13. CONTRACTOR SHALL USE A WATER TIGHT PLUG DURING THE WATER MAIN INSTALLATION. PLUG SHALL REMAIN IN PLACE AT ALL TIMES.
14. CONTRACTOR IS REQUIRED TO SUBMIT A COMPACTION REPORT AS SPECIFIED IN THE SPECIFICATIONS.
15. AS APPROPRIATE, CONTRACTOR TO TAKE ALL NECESSARY MEASURES, INCLUDING HAND DIGGING, TO MAINTAIN THE INTEGRITY OF THE EXISTING DRAINAGE PIPES.
16. LOCATION OF EXISTING DRAINAGE IS APPROXIMATE AND SHOULD BE VERIFIED BY THE CONTRACTOR IN THE FIELD.
17. THE CONTRACTOR IS REQUIRED TO PROVIDE A SUPERINTENDENT OF OPERATIONS, A QUALIFIED INDIVIDUAL WHO WILL BE ON-SITE AT ALL TIMES TO ADDRESS THE CRITICAL NEEDS OF THE PROJECT. IN ADDITION, A 7 DAY/24 HOUR CELL PHONE MUST BE LISTED WITH THE CITY TO RESPOND TO ALL PROJECT BUSINESS AND/OR EMERGENCY CALLS WITHIN ONE-HOUR.
18. FOR FURTHER UTILITY SUPPORT AND EMERGENCY RESPONSE REQUESTS, THE CONTRACTOR IS ADVISED TO CONTACT: KEYPAN @ GAS, N-STAR @ ELEC, VERIZON @ TEL, AT&T CABLE, COMCAST CABLE, NEWTON WATER, NEWTON SEWER & DRAIN.
19. ANY UTILITY RELOCATIONS, AND/OR UTILITY ISSUES, ARE TO BE DIRECTLY ADDRESSED AND COORDINATED BY THE CONTRACTOR WITH THE RESPECTIVE UTILITY COMPANY. FURTHER, IN THE EVENT CERTAIN AGED GAS MAINS AND/OR SERVICES ARE TARGETED TO BE RENEWED THEN THE CONTRACTOR SHALL MODIFY HIS PAVING SCHEDULE(S) AS DETERMINED BY THE ENGINEER.
20. ALL EXCESS EXCAVATION MATERIAL AND/OR WASTE ITEMS OF ANY TYPE OR MATERIAL, ARE TO BE DISPOSED OF AT A LEGAL DUMPING SITE AT THE CONTRACTORS OWN EXPENSE. NO DISPOSAL SITE SHALL BE PROVIDED BY THE CITY.
21. ALL DEBRIS IS TO BE REMOVED FROM THE SITE ON A DAILY BASIS. HOWEVER, IF SITE CONSTRAINTS ARE NOT AN ISSUE THEN THE CONTRACTOR CAN MAINTAIN A LOCKED LID DUMPSTER AT THE DISCRETION OF THE ENGINEER AND BY PERMIT ONLY AT NO ADDITIONAL EXPENSE TO THE OWNER.
22. ALL RESIDUAL MATERIAL IS TO BE HAND BROOMED FROM THE ROADWAY AT THE END OF EACH DAYS OPERATION AND EVERY MEASURE TAKEN TO MINIMIZE DUST, INCLUSIVE OF CHEMICAL TREATMENT AND/OR WATER APPLICATION AS DIRECTED BY THE ENGINEER.
23. STAGING AND STOCKPILING SITES, FOR NEW MATERIALS WILL BE APPROVED ON A SITE BY SITE BASIS SUBJECT TO THE REVIEW OF TRAFFIC, SCHOOL, PARKING, AND ANY OTHER CRITICAL FACTORS WHICH MAY ADVERSELY AFFECT THE AREAS WITHIN AND/OR ADJACENT TO THE CONSTRUCTION ZONE.
24. ALL EXCAVATIONS ARE TO BE BACKFILLED IN LIFTS, WITH EACH SUCCESSIVE LIFT BEING COMPACTED ONLY WITH APPROVED MECHANICAL TYPE COMPACTORS AND/OR PNEUMATICALLY POWERED TAMPING BITS, UNTIL SUCH TIME AS THE OPTIMUM COMPACTION REQUIREMENTS ARE OBTAINED. THIS IS STRICTLY ENFORCED TO ENSURE LONG-TERM STRUCTURAL INTEGRITY OF THE ROADWAY SYSTEM.
25. AREAS BEYOND THE LIMITS OF THIS CONTRACT AND/OR STRUCTURES DISTURBED AND/OR DAMAGED BY THE CONTRACTOR, ARE TO BE REPAIRED AND/OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE.
26. THE CONTRACTOR IS RESPONSIBLE FOR ALL SAFETY ASPECTS OF THE PROJECT, AND COMPLIANCE WITH THE MOST CURRENT U.S. OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA) & THE MASSACHUSETTS DEPT. OF LABOR DIVISION OF OCCUPATIONAL SAFE REGULATIONS (617-727-3982). THESE COMPLIANCE STANDARDS ARE OF PARTICULAR IMPORTANCE WITH REGARD TO TRENCH EXCAVATION SAFETY REQUIREMENTS.
27. HOURS OF OPERATIONS ARE SET BY LAW. NO MACHINES OR EQUIPMENT ARE TO BE ACTIVATED BEFORE 7:00 A.M. & NO WORK IS TO EXTEND BEYOND 4:30 P.M. NO WEEKEND OR HOLIDAY WORK IS ALLOWED WITHOUT SPECIAL PERMISSION. THE CONTRACTOR IS LIMITED TO AN EIGHT HOUR WORKDAY UNLESS OTHERWISE APPROVED BY THE CITY.
28. PRIOR TO MOBILIZATION, THE CONTRACTOR IS TO COORDINATE WITH THE WATER DEPT. AND THE ENGINEER, AND IS THEN TO LOCATE, UNCOVER, BLOW-OUT, AND DETERMINE THE SERVICEABILITY OF ALL EXISTING GATE VALVES AND/OR HYDRANTS WHICH ARE TO BE UTILIZED TO PERFORM THE WORK. OPERATION OF THE GATE VALVES WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND IS TO BE PERFORMED UNDER THE DIRECTION OF THE ENGINEER.
29. THE CONTRACTOR MUST GIVE THE CITY OF NEWTON WATER DEPARTMENT (617-796-1440), THE CITY OF NEWTON CUSTOMER SERVICE CENTER (617-796-1000), THE NEWTON FIRE DEPT. (617-796-2210), THE NEWTON POLICE DEPT. (617-796-2100) AT LEAST 24 HOURS NOTICE PRIOR TO ANY SCHEDULED WATER MAIN SHUT-DOWN. IN ADDITION, ANY EMERGENCY SHUT-DOWN OF WATER MAINS IS TO BE REPORTED TO THESE SAME AUTHORITIES FOR EACH EVENT. FURTHER, ANY SCHEDULED WATER MAIN SHUT-DOWN(S) SHALL NOT BEGIN BEFORE 9:00 A.M. UNLESS OTHERWISE DIRECTED.
30. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING, COMMUNICATING WITH, AND SUBSEQUENTLY ADDRESSING THE NEEDS OF THE VISUALLY IMPAIRED AND/OR THE PHYSICALLY CHALLENGED WHO RESIDE IN OR ABOUT THE PROJECT ZONE OR WHO OTHERWISE MUST ACCESS THE AREA(S).
31. THE VARIOUS PROPOSED WATER MAINS, WATER SERVICES, HYDRANTS, VALVES, GENERAL SCOPE OF COMPONENTS AND OTHER APURTENANCES WHICH ARE SHOWN ON THESE PLANS ARE SUBJECT TO CHANGE AT THE ENGINEERS DISCRETION IN THE FIELD.
32. THE FINAL DETERMINATION OF THE PROJECT LIMITS SHALL BE ESTABLISHED IN THE FIELD BY THE ENGINEER, INCLUSIVE OF WORK WHICH MUST BE PERFORMED ALONG THE OUTER PERMETER(S) OF THE PROJECT ZONE(S) IN ORDER TO REPAIR DEFECTIVE WATER APURTENANCES TO ISOLATE THE PROJECT ZONE FROM WATER PRESSURE INTERFERENCE.
33. THE CONTRACTOR IS TO BAG AND TAG ALL OUT OF SERVICE HYDRANTS, AND IS TO NOTIFY THE CITY OF NEWTON FIRE DEPT. OF ALL OUT OF SERVICE HYDRANTS IN A MANNER ACCEPTABLE TO THE ENGINEER.
34. ALL EXISTING WATER SERVICES SHALL BE RENEWED FROM THE MAIN TO THE PROPERTY LINE UNLESS OTHERWISE DIRECTED BY THE ENGINEER (NOTE: P.V.T. COUPLING SIZES WILL VARY). THIS WORK INCLUDES THE TAPING OF THE MAIN (GENERALLY OF 1" SIZE, HOWEVER IN CERTAIN CASES A SERVICE COCK OF 1 1/2" OR 2" SIZE WILL BE REQUIRED).
35. NEW COPPER SERVICES, AS WELL AS THE NEW CURB STOP ARE TO BE CONSISTENT IN SIZE WITH THE MAIN TAP. SUBSEQUENT TO THIS WORK THE CONTRACTOR IS TO FLUSH THE PIPE AT THE SILL COCK NEAREST TO THE METER, AND IF FURTHER ACTION IS DEEMED NECESSARY BY THE ENGINEER, THE CONTRACTOR IS TO COORDINATE WITH THE BUILDING OWNER TO PERFORM THE REMOVAL, CLEARING AND REINSTALLATION OF THE WATER METER, METER VALVE AND SEAL.
36. THE CONTRACTOR IS REQUIRED TO LEAVE WRITTEN NOTICES AT ALL ADDRESSES DIRECTLY AFFECTED BY THE SCHEDULED DISRUPTION OF THE WATER SUPPLY. THESE NOTICES MUST BE DELIVERED AT LEAST 24 HOURS IN ADVANCE OF EITHER THE SCHEDULED SHUT-DOWN AND/OR A REQUEST FOR ACCESS TO THE METER. NOTIFICATIONS SHALL BE ON A FORMAT APPROVED OR PROVIDED BY THE ENGINEER, AND SHALL BE POSTED IN A CONSPICUOUS ADDRESS AND AS NEAR TO THE LOCATION OF THE REGULAR MAIL DELIVERY AS POSSIBLE.
37. ALL EXISTING GATE VALVES ARE TO BE REPLACED WITH NEW GATE VALVES, NEW SECTIONS OF DUCTILE IRON PIPE, AND NEW COUPLINGS ON ANY WATER MAIN WHICH IS CLEANED AND LINED.
38. THE CONTRACTOR IS REQUIRED TO TAKE AS-BUILT TIES AS THE WORK PROGRESSES. THIS ACTIVITY IS TO TAKE PLACE UNDER THE DIRECT SUPERVISION OF THE ENGINEER AND ALL RECORDS ARE TO BE SUBMITTED ON A DAILY BASIS AND ON A FORMAT WHICH IS ACCEPTABLE TO THE ENGINEER.
39. THE CONTRACTOR MUST PURGE ALL AIR FROM THE WATER MAINS & SERVICES WHEN THE VALVES ARE REOPENED, AND MAINTAIN LOW FLOW UNTIL SUCH TIME AS ALL DISCOLORATION AND AIR IS REMOVED FROM THE WATER SYSTEM.
40. ALL "SHORT-TERM" STEEL TRENCH PLATES, (UP TO FIVE CALENDAR DAYS OF USE), ARE TO BE SECURED IN SUCH A MANNER SO AS TO PREVENT MOVEMENT AND/OR RATTLING. ALL "LONG-TERM" PLATES ARE TO BE RECESSED INTO THE EXISTING ROADWAY.
41. THE CONTRACTOR IS TO MAINTAIN AND/OR PROVIDE EMERGENCY VEHICLE ACCESS THROUGHOUT EACH PROJECT AREA. IN ADDITION, NO TRAFFIC DELAY IS TO EXCEED FOUR MINUTES IN DURATION ON ANY ARTERIAL ROAD. ALL SECONDARY ROADS MUST BE APPROPRIATELY DETOURED, MARKED, OR ADDITIONALLY SIGNED TO PREVENT DELAYS AND/OR CONUSION.
42. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION, POSTING AND SUBSEQUENT REMOVAL OF ALL TEMPORARY PARKING BANS. SIGNS ARE NOT TO BE POSTED ON TREES. THE CONTRACTOR IS TO NOTIFY THE CITY OF NEWTON TRAFFIC DIVISION (617-796-1490) AT LEAST 24 HOURS PRIOR TO ACTUAL POSTING.
43. FOR FURTHER DETAILS NOT SHOWN ON THESE PLANS SEE "CITY OF NEWTON GENERAL CONSTRUCTION DETAILS". A COPY OF WHICH CAN BE OBTAINED AT THE OFFICE OF THE CITY ENGINEER.
44. TEMPORARY TRENCH PAYMENT SHALL BE INSTALLED ON A WEEKLY BASIS. OWNER RESERVES THE RIGHT TO REQUEST PAYMENT INSTALLATION AT MORE FREQUENT INTERVALS IF WEATHER OR OTHER CONDITIONS MAKE IT NECESSARY. THERE WILL BE NO ADDITIONAL COMPENSATION FOR CHANGES IN THE PAVING SCHEDULE. TEMPORARY PAVEMENT SHALL BE COMPLETELY REMOVED PRIOR TO THE INSTALLATION OF PERMANENT PAVEMENT. PERMANENT PAVEMENT SHALL BE INSTALLED AT A TIME SPECIFIED BY THE OWNER.
45. IN THE EVENT THE ROADWAY CASTINGS HAVE BEEN LOWERED AND FINAL TOP WILL NOT BE APPLIED BEFORE MANDATORY WINTER SHUTDOWN, THEN THE CONTRACTOR IS TO RAISE ALL CASTINGS AND GATES TO BINDER GRADE AT HIS OWN EXPENSE.
46. THE CONTRACTOR MAY BE REQUIRED FROM TIME TO TIME TO MAKE SCHEDULE CHANGES AND/OR TO MAKE SPECIAL ACCOMMODATIONS IN ORDER TO ELIMINATE AND/OR MINIMIZE ANY ADVERSE IMPACT ON CERTAIN PUBLIC OR PRIVATE EVENTS, TRAFFIC, ETC.
47. THE ILLUSTRATIONS OF PROPOSED WORK WHICH ARE SHOWN ON THESE PLANS ARE SUBJECT TO CHANGE BASED UPON FIELD CONDITIONS, OR AS MAY OTHERWISE BE NECESSARILY ALTERED BY THE ENGINEER.
48. UPON THE COMPLETION OF THE RESPECTIVE WATER MAIN REHABILITATION ACTIVITIES, THE CONTRACTOR IS TO RESTORE ALL ROADWAY ELEMENTS IN ACCORDANCE WITH THE CASE-BY-CASE DIRECTIVES OF THE ENGINEER.
49. THE CONTRACTOR IS TO SUBSTANTIALLY COMPLETE ALL WORK, EXCLUSIVE OF FINAL ROADWAY TOP, BEFORE ENTERING INTO THE NEXT DESIGNATED WORK ZONE, UNLESS, OR UNTIL, THE ENGINEER SO DIRECTS.
50. THE CONTRACTOR SHALL NOT CUT THROUGH THE MAJOR PORTION OF THE ROOT SYSTEM OF STREET TREES UNLESS PERMITTED TO DO SO BY THE CITY OF NEWTON TREE SUPERINTENDENT, AND ANY SUCH LIMB REMOVAL SHALL BE DONE IN ACCORDANCE WITH THE TREE SUPERINTENDENTS INSTRUCTIONS. NO LIMBS ARE TO BE "SNAPPED" OFF.
51. LEDGE/ROCK REMOVAL SHALL BE BY RAM HOE METHOD ONLY. ONLY IN EXTREME CASES WHERE THE CONTRACTOR HAS MADE EVERY REASONABLE EFFORT TO REMOVE THE LEDGE/ROCK BY THE RAM HOE METHOD, AND HAS FAILED, SHALL CONTROLLED BLASTING BE ALLOWED.
52. THE ENGINEER SHALL BE SOLE JUDGE AS TO WHETHER OR NOT THE RAM HOE EQUIPMENT IS OF ADEQUATE SIZE TO SUIT BOTH THE AREA AND THE TASK BEFORE THE BLASTING OPTION IS ALLOWED.
53. NO DETOURS WILL BE ALLOWED UNLESS APPROVED AND/OR DIRECTED BY THE ENGINEER, HOWEVER DETOURING IS NOT TO BE FACTORED INTO THE CONTRACTORS OPERATIONAL PLANS FOR THIS PROJECT.
54. ALL DETOURS SHALL BE CLEARLY MARKED ALONG THEIR ENTIRE ROUTE, AND ONLY WITH APPROVED DEVICES & SIGNS, SUCH THAT A STEADY STREAM OF TRAFFIC IS TO BE SAFELY MAINTAINED AT ALL TIMES.
55. NON-EMERGENCY DETOURS MUST BE APPROVED BY THE CITY OF NEWTON TRAFFIC ENGINEER AT LEAST 24 HOURS IN ADVANCE OF THE EVENT. TO THAT END THE CONTRACTOR MAY BE REQUIRED TO PROVIDE A HARD-COPY TRAFFIC CONTROL PLAN TO THE TRAFFIC ENGINEER FOR COMMENTARY OR APPROVAL.
56. THE CONTRACTOR IS REQUIRED TO STRATEGICALLY SCHEDULE HIS WORK IN ORDER TO MINIMIZE THE IMPACT ON ESTABLISHED TRUCK, FIRE DEPT., PUBLIC WORKS AND COMMUTER TRAFFIC PATTERNS. TO THAT END THE CONTRACTOR IS TO RESTRICT HIS OPERATIONS TO THE SPECIFIC WORK ZONE WHICH MAY BE MODIFIED BY DIRECTION OR BY MUTUAL AGREEMENT. FURTHER, THE CONTRACTOR IS NOT TO BEGIN EXCAVATION OPERATIONS IN THE NEXT WORK ZONE UNTIL THE WORK IN THE PREVIOUS WORK ZONE HAS BEEN SUBSTANTIALLY COMPLETED TO THE SATISFACTION OF THE ENGINEER.
57. THE CITY OF NEWTON RESERVES THE RIGHT TO DESIGNATE THE ORDER IN WHICH THE WORK IS COMPLETED. THE INTENT IS TO MINIMIZE THE IMPACT WHICH THE CONSTRUCTION RELATED ACTIVITIES MAY HAVE ON THE SCHEDULED PUBLIC EVENTS, ON PEAK PERIODS OF TRAFFIC, ON SCHOOL OPERATIONS, ETC. TO THAT END, THE CONTRACTOR IS REQUIRED TO WORK CLOSELY WITH THE CITY OF NEWTON TO CREATE THE BEST OVERALL SCHEDULE, WHICH MUST BE EXPECTED TO CHANGE FROM TIME TO TIME AS FIELD CONDITIONS, WEATHER, AND/OR OTHER SITUATIONS MAY DICTATE.
58. UTILITY MAINS, SEWER HOUSE CONNECTIONS AND/OR WATER SERVICES LOCATED ALONG THE PROJECT CORRIDOR(S) ARE NOT ALWAYS SHOWN IN THEIR ENTIRETY, NOR IN THEIR EXACT LOCATIONS, THEREFORE ANY SUPPLEMENTAL HARD-COPY SERVICE AND/OR TRUNK LINE RELATED INFORMATION MUST BE RETRIEVED AND SUBSEQUENTLY LAID OUT AND CLEARLY MARKED IN THE FIELD BY THE CONTRACTOR. THE AFOREMENTIONED HARD-COPY INFORMATION WILL BE SUPPLIED BY THE CITY ONLY IF SUCH RECORDS EXIST AND SHALL BE SUPPLIED ON A CASE-BY-CASE BASIS AS SUPPLEMENTAL STREET OPENINGS ARE IDENTIFIED BY THE CONTRACTOR, OR AS THEY MAY BE OTHERWISE REQUIRED BY THE ENGINEER.
59. STREET OPENINGS ARE TO BE MADE ONLY WITH THE PRIOR APPROVAL OF THE CITY ENGINEER. THE INTENT OF THE ORDER IS TO PREVENT AN OVERABUNDANCE OF STREET OPENINGS AND/OR TO MINIMIZE THE IMPACT THAT THESE OPERATIONS WILL HAVE ON TRAFFIC RELATED ISSUES.
60. CONTRACTOR SHALL PROTECT THE STRUCTURAL INTEGRITY OF ALL 8" DIAMETER CAST IRON GAS MAINS AND SMALLER IN ACCORDANCE WITH 220 CMR 113. CONTRACTOR SHALL LIMIT TRENCH WIDTH TO 3 FEET MAXIMUM WHERE UNDER MINING OCCURS AT A PERPENDICULAR CROSSING.
61. ALL GAS SERVICES ARE NOT SHOWN ON PLANS. CALL "DIG SAFE" (1-888-344-7233) FOR FIELD LOCATIONS OF ALL UTILITIES PRIOR TO EXCAVATION.
62. SILT SACKS SHALL BE USED ON ALL CATCH BASINS WITHIN PROJECT LIMITS TO MINIMIZE SILT DEPOSITIONS INTO DRAINAGE SYSTEM. AT LOCATIONS WHERE TEMPORARY SERVICES CROSS THE ROAD, SERVICES SHALL BE ADEQUATELY PROTECTED IN A SOLID SLEEVE, PLACED IN A TRENCH OF ADEQUATE DEPTH AND COVERED WITH BITUMINOUS PAVEMENT TO PREVENT BREAKAGE DURING CONSTRUCTION.
63. ALL ROADWAYS ARE ASPHALT UNLESS OTHERWISE NOTED.
64. TEMPORARY BY-PASS PIPING FIRE SERVICE CONNECTIONS (WHETHER SHOWN ON THESE PLANS OR NOT), AND PUBLIC HYDRANT RISERS ARE TO BE ESTABLISHED AND MAINTAINED AT ALL TIMES VIA A BY-PASS PIPING SYSTEM, BASED UPON A TARGET PLAN THAT HAS BEEN PRE-APPROVED BY THE ENGINEER, WHICH AT A MINIMUM SHOWS THE PIPE SIZE, LOCATIONS OF RECESSED CROSSINGS & TEMPORARY HYDRANT LOCATIONS.
65. BY-PASS PIPES ARE NOT TO INTERFERE WITH PEDESTRIAN, HANDICAP, OR VEHICULAR TRAFFIC. SUPPLEMENTAL RAMPING AND/OR ADDITIONAL CUT-IN/HOT MIX CAPPED RECESSED PIPES, OR THERE APURTENANCE, WILL BE AT THE DISCRETION OF THE ENGINEER SHOULD THE NECESSITY ARISE DURING THE COURSE OF THE PROJECT.
66. THE CONTRACTOR IS TO PROVIDE A TEMPORARY FIRE LINE BY-PASS CONNECTION TO ALL BUILDINGS THAT ARE CURRENTLY SERVICED BY A FIRE LINE.
67. ALL TEMPORARY BY-PASS, CEMENT CONCRETE AND/OR PERMANENT BIT. PATCH WORK (SUBJECT TO APPLICABLE RESTRICTIONS) MUST BE COMPLETED PRIOR TO THE ONSET OF FREEZING AND/OR WINTER CONDITIONS (OCT 31 TARGET). ALL OTHER WORK MUST BE COMPLETED BY DECEMBER 1ST, UNLESS A WRITTEN ORDER HAS BEEN ISSUED BY THE ENGINEER TO DO OTHERWISE.
68. PRIOR TO THE START OF CONSTRUCTION, A TEMPORARY BY-PASS PIPING SYSTEM SHALL BE INSTALLED, CHLORINATED, AND TESTED PRIOR TO INSTALLING TEMPORARY SERVICE CONNECTIONS. THE LOCATION AND METHOD OF TEMPORARY BY-PASS PIPING SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND THE CONTRACTOR SHALL SUBMIT A BY-PASS PIPING PLAN FOR ENGINEER REVIEW PRIOR TO INSTALLATION.
69. PAYMENT FOR TEMPORARY BY-PASS PIPING SHALL BE LUMP SUM. TEMPORARY BY-PASS SYSTEM REQUIRES A MINIMUM OF A 4-INCH AND 2-INCH PIPING SYSTEM THROUGHOUT PROJECT EXTENTS. ALL COMPONENTS IN TEMPORARY BY-PASS PIPING SYSTEM SHALL BE NSF-61 APPROVED AND SUBMITTED TO ENGINEER FOR APPROVAL.
70. TEMPORARY BY-PASS PIPING WILL BE USED ALONG THE ENTIRE LENGTH OF THE PROJECT AREAS.
71. TEST PITS SHALL BE DIG AT EACH EXISTING WATER SERVICE ALONG THE PROJECT LIMITS TO DETERMINE THE WATER SERVICE LINE MATERIAL. ALL SERVICES THAT ARE NOT COPPER SHALL BE REPLACED. ALL COPPER SERVICES SHALL REMAIN.
72. EXISTING WATER MAIN SHALL BE REMOVED AND PROPERLY DISPOSED OF WHERE NEW WATER MAINS ARE PROPOSED.
73. NO WORK IS TO BE COMPLETED FROM STA. 46+00 TO STA. 49+35. THIS STATIONING IS FOR REFERENCE ONLY.

LEGEND

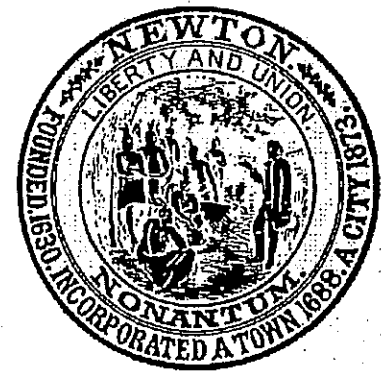
EXISTING	DESCRIPTION	PROPOSED
— V —	WATER MAIN	-----
—	CLEAN AND LINE WATER MAIN	-----
⊗	GATE VALVE	⊗
⊗	GATE VALVE, MANHOLE	⊗
⊗	REDUCER	⊗
⊗	SOLID SLEEVE	⊗
⊗	TEE	⊗
⊗	COUPLING	⊗
⊗	CAP	⊗
⊗	FIRE HYDRANT	⊗
⊗	WATER SERVICE PLUG	⊗
⊗	WATER SERVICE INSTALLED PRIOR TO 1980	⊗
⊗	WATER SERVICE INSTALLED AFTER 1980	⊗
⊗	WATER MAIN BEND	⊗
⊗	SEWER LINE	⊗
⊗	DRAIN MANHOLE	⊗
⊗	CATCH BASIN	⊗
⊗	DRAIN LINE	⊗
⊗	ELEC. LINE	⊗
⊗	ELEC. MANHOLE	⊗
⊗	UTILITY POLE	⊗
⊗	GUY WIRE	⊗
⊗	LIGHT	⊗
⊗	GAS LINE	⊗
⊗	GAS VALVE	⊗
⊗	COMM. MANOLE	⊗
⊗	COMM. LINE	⊗
⊗	LIMIT OF WORK	⊗
⊗	STONEWALL	⊗

ABBREVIATIONS

HYD	HYDRANT
RCP	REINFORCED CONCRETE PIPE
D.I.	DUCTILE IRON
C.I.	CAST IRON
INV	INVERT
TYP	TYPICAL
ODF	CONTROLLED DENSITY FILL
CB	CATCH BASIN
DMH	DRAIN MANHOLE
SMH	SEWER MANHOLE
EX	EXISTING
B.S.	BARE STEEL
C.S.	COATED STEEL
P.S.	PLASTIC
L.P.	LOW PRESSURE
I.P.	INTERMEDIATE PRESSURE
H.P.	HIGH PRESSURE
EOP	EDGE OF PAVEMENT
BIT.	BITUMINOUS ASPHALT
CONC.	CONCRETE
GR.	GRANITE



MAP OF THE CITY OF NEWTON WORK ZONES N.T.S.



NEWTON CITY HALL
1000 COMMONWEALTH AVENUE
NEWTON CENTRE, MA 02459

NEWTON, MASSACHUSETTS

GENERAL PROCESS AND CONSTRUCTION NOTES

WATER MAIN REHABILITATION AT HOMER STREET AND LOWELL AVENUE

Designed By: MTR
Checked By: JWG
Drawn By: MTR

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T&H

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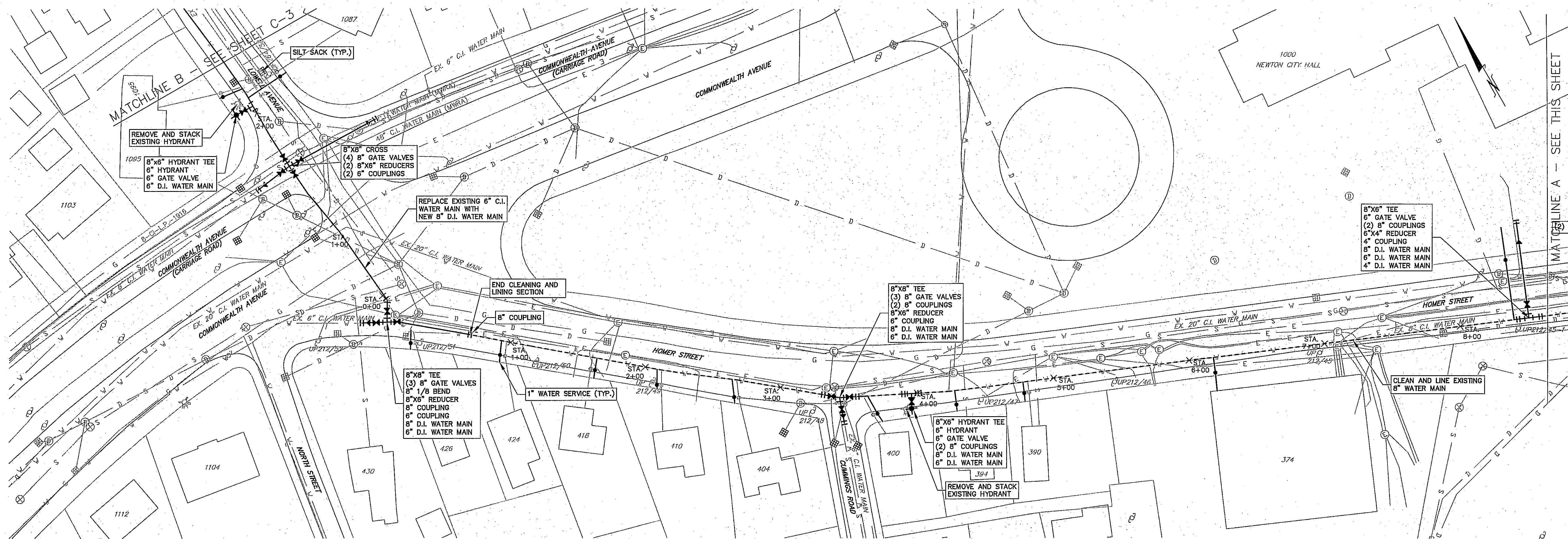
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DATE: MAY 2012

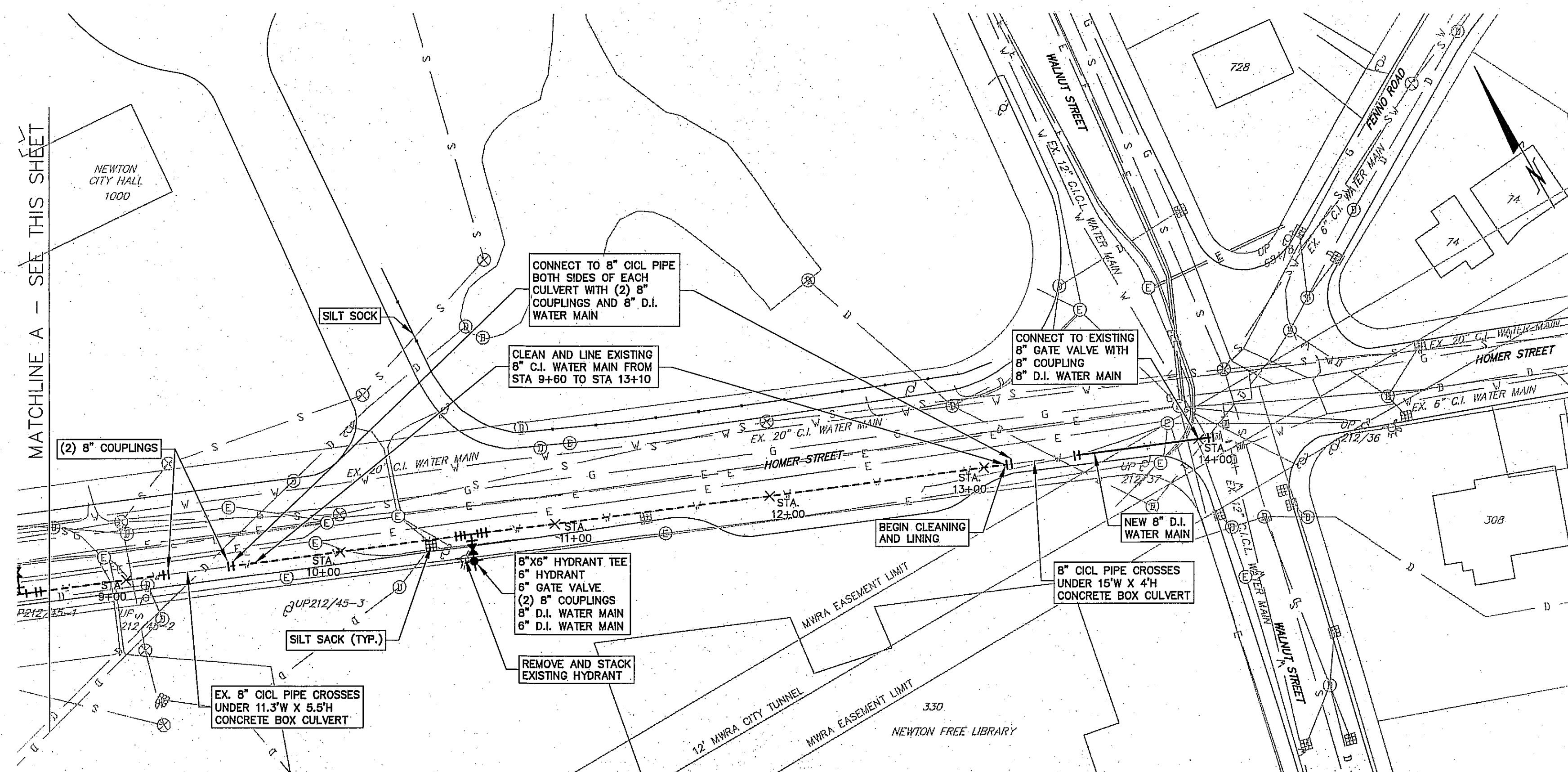
SCALE: NONE

SHEET: 1 OF 8

C-1

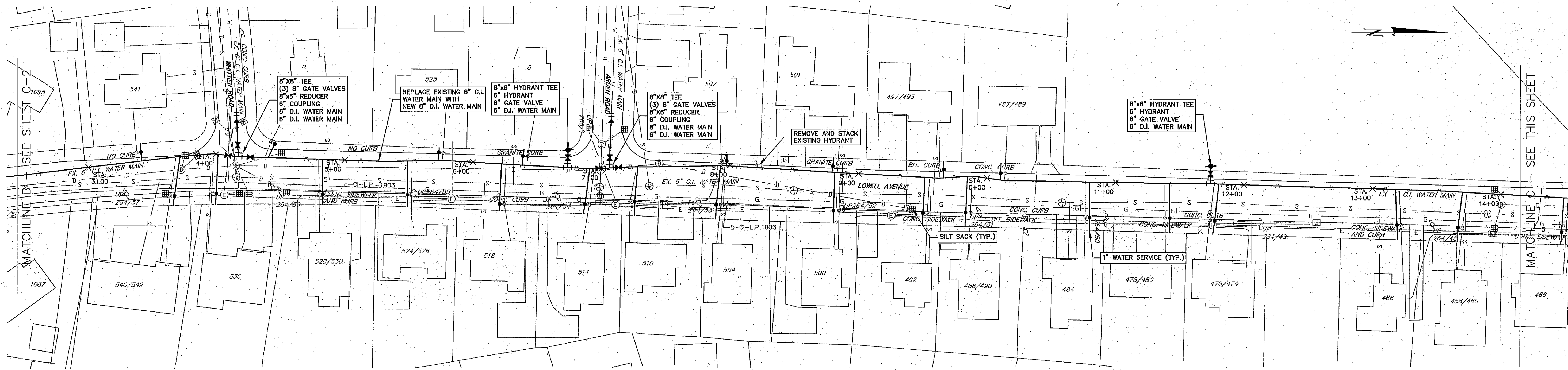


HOMER STREET STA. 0+00 TO STA. 8+65
LOWELL AVENUE STA. 0+00 TO STA. 2+45
 SCALE: 1" = 40'

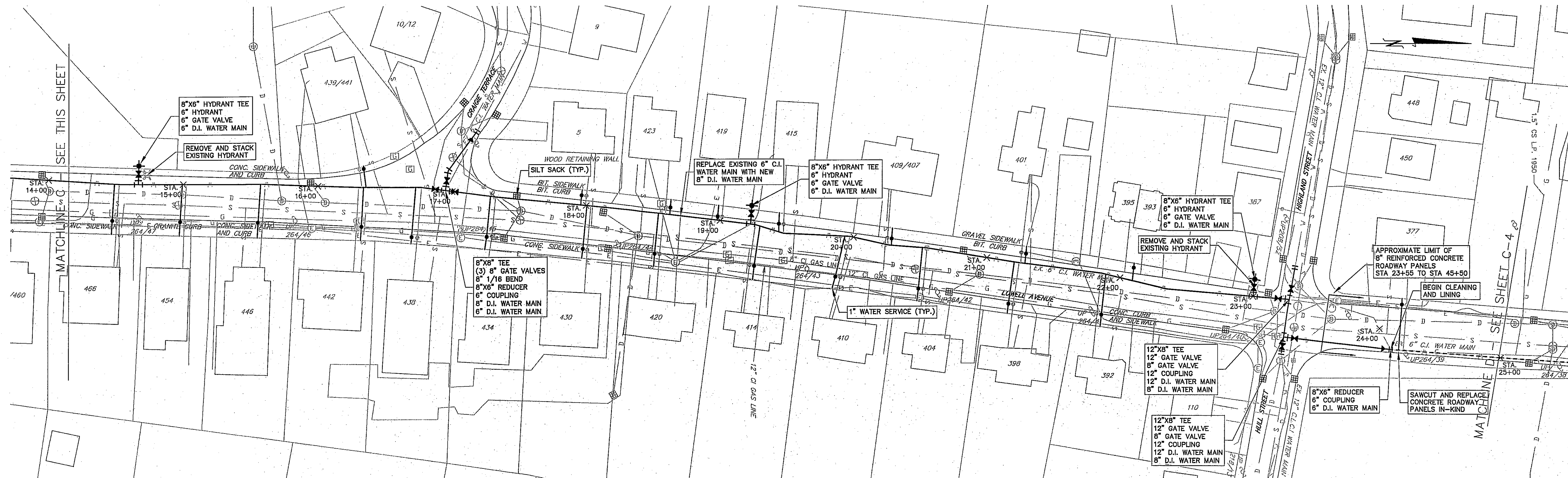


HOMER STREET STA. 8+65 TO STA. 14+05
 SCALE: 1" = 40'

NEWTON, MASSACHUSETTS WATER MAIN REHABILITATION AT HOMER STREET AND LOWELL AVENUE		STA. 0+00 TO STA. 14+05 LOWELL AVENUE STA. 0+00 TO STA. 2+45	THIS DOCUMENT IS THE PROPERTY OF TATA & HOWARD, INC. AND ITS CLIENT. REPRODUCTION OR MODIFICATION WITHOUT WRITTEN CONSENT IS PROHIBITED.	Drawn By: MTR Designed By: MTR Checked By: JWG Approved By: KLG
HOMER STREET STA. 0+00 TO STA. 14+05 LOWELL AVENUE STA. 0+00 TO STA. 2+45		Description Date Rev.		
		 TATA & HOWARD Water and Wastewater Consultants		
T&H NO.: 2596 DATE: MAY 2012 SCALE: 1 INCH = 40 FEET SHEET: 2 OF 8		C-2		



LOWELL AVENUE STA. 2+45 TO STA. 14+15
SCALE: 1" = 40'



LOWELL AVENUE STA. 14+15 TO STA. 25+00
SCALE: 1" = 40'

NEWTON, MASSACHUSETTS

LOWELL AVENUE

STA. 2+45 TO STA. 25+00

WATER MAIN REHABILITATION
AT HOMER STREET AND
LOWELL AVENUE

No.	Description	Date	Rev.

TATA & HOWARD
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T&H NO.: 2596

DATE: MAY 2012

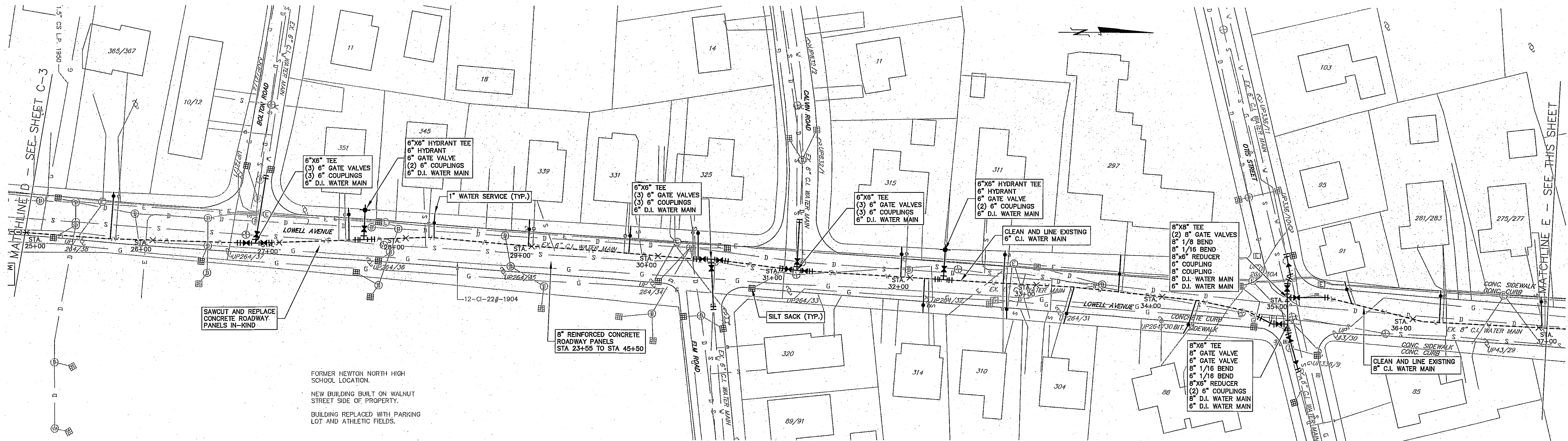
SCALE: 1 INCH = 40 FEET

SHEET: 3 OF 8

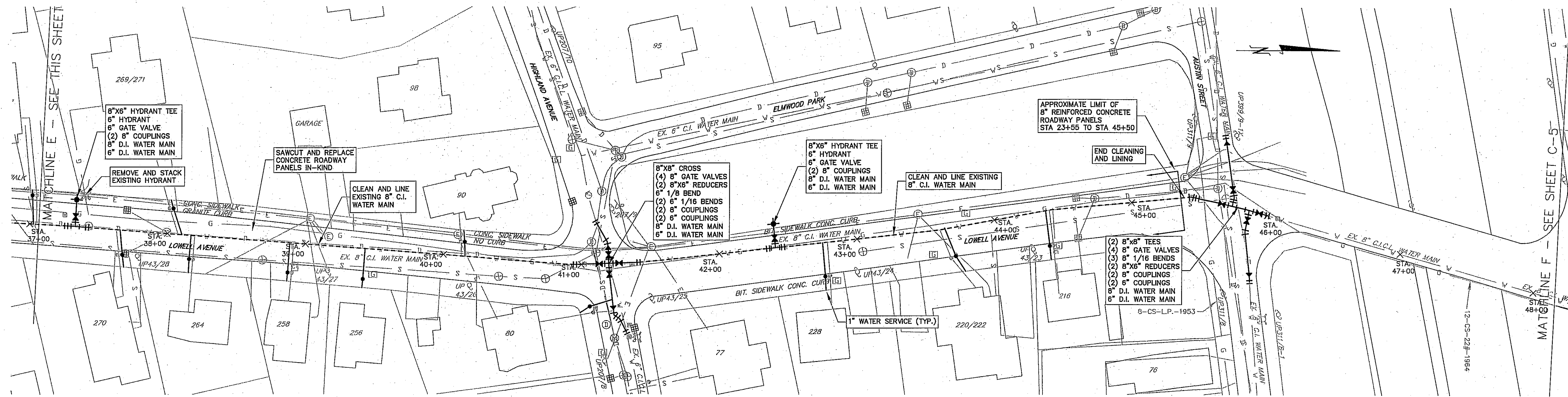
C-3

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Drawn By: MTR Design: MTR Checked By: JWG Approved By: KLG



LOWELL AVENUE STA. 25+00 TO STA. 37+00
SCALE: 1" = 40'

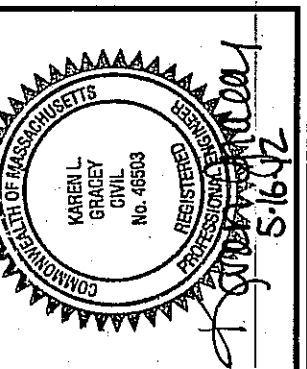


LOWELL AVENUE STA. 37+00 TO STA. 46+00
SCALE: 1" = 40'

NEWTON, MASSACHUSETTS
WATER MAIN REHABILITATION
AT HOMER STREET AND
LOWELL AVENUE

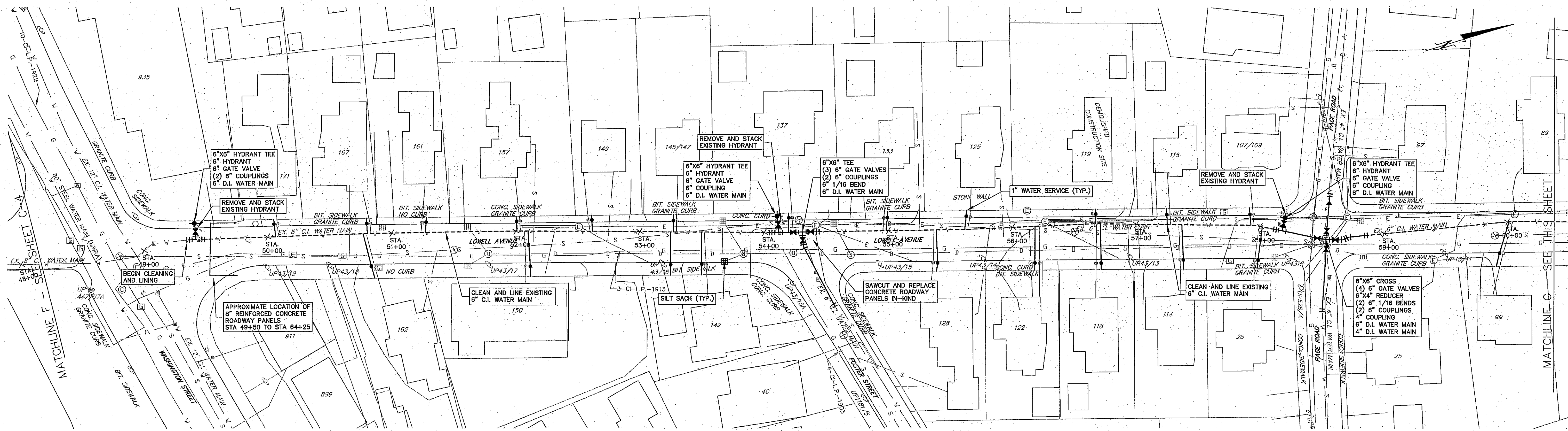
LOWELL AVENUE
STA. 25+00 TO
STA. 48+15

Rev.	Date	Description

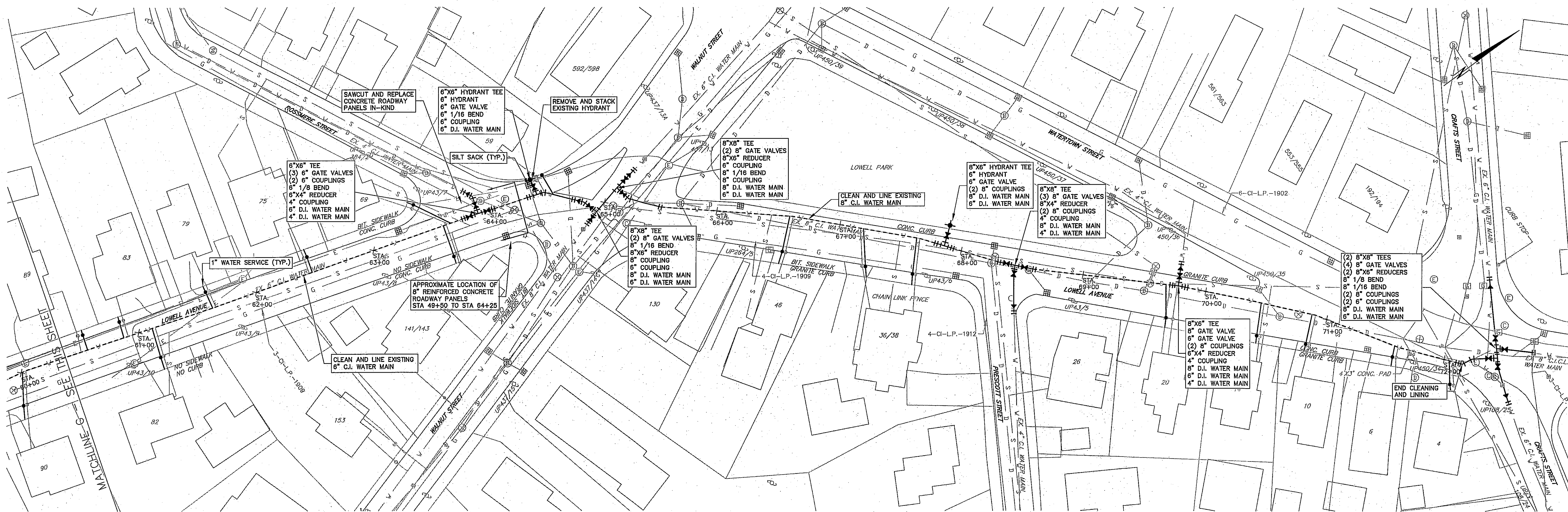


TATA & HOWARD
Water and Wastewater Consultants

T&H NO.: 2596
DATE: MAY 2012
SCALE: 1 INCH = 40 FEET
SHEET: 4 OF 8



LOWELL AVENUE STA. 48+15 TO STA. 60+45
SCALE: 1" = 40'



LOWELL AVENUE STA. 60+45 TO STA. 72+80
SCALE: 1" = 40'

NEWTON, MASSACHUSETTS			TATA & HOWARD Water and Wastewater Consultants
WATER MAIN REHABILITATION AT HOMER STREET AND LOWELL AVENUE			
LOWELL AVENUE STA. 48+15 TO STA. 72+80	Drawn By: MTR Designed By: MTR Checked By: JWG Approved By: KLG	T&H NO.: 2596 DATE: MAY 2012 SCALE: 1 INCH = 40 FEET SHEET: 5 OF 8	

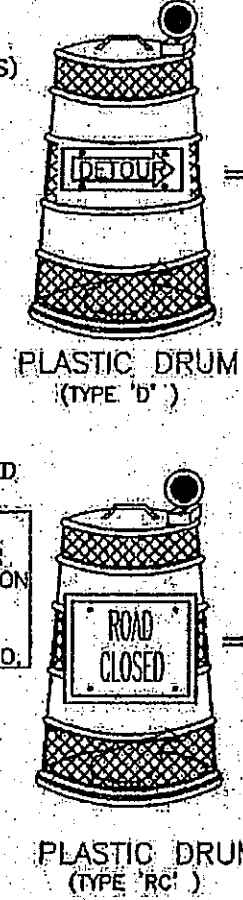
SIGN REQUIREMENTS & LEGEND:

- SIGNS ARE TO BE FIRMLY FASTENED TO THE RESPECTIVE SUPPORTS AND/OR DRUMS AND ARE TO COMPLY WITH THE DIRECTIVES OUTLINED IN THE GENERAL CONSTRUCTION DETAILS.
- POST MOUNTED SIGNS ARE TO BE SET IN FULL VIEW WITH THE BOTTOM OF THE SIGN NOT LESS THAN 7' NOR MORE THAN 10' ABOVE THE ADJACENT GRADE.
- SIGNS ARE TO BE PROFESSIONALLY MADE OF 3/4" EXTERIOR PLYWOOD. THE FIELD IS TO BE REFLECTORIZED ORANGE BEARING A BLACK LEGEND 6" IN HEIGHT AND A BLACK SOLID 1" BORDER SET 1/4" IN FROM THE EDGE.
- ANY SIGN WHICH IS DAMAGED FOR ANY REASON DURING THE TERM OF THE PROJECT IS TO BE IMMEDIATELY REPLACED.
- ANY MISSING SIGN SHALL REDUCE THE PAYMENT AT THE RATE OF THE PRO-RATED VALUE FOR THE LENGTH OF TIME THAT THE SIGN IS OUT OF SERVICE.
- SIGNS AND SIGN POSTS ARE TO BE MOUNTED AND ESTABLISHED SO AS TO BE BOTH STURDY AND WIND RESISTANT. ONLY ADEQUATELY SIZED NUT, BOLT, & WASHER FASTENERS SHALL BE USED. NO NAILS ARE TO BE USED TO FASTEN ANY SIGN. NOR SHALL ANY SIGN BE MOUNTED ON ANY TREE. THE SIGN LOCUS ON THESE PLANS REPRESENT THE MOST LIKELY LOCATIONS; HOWEVER, FINAL LOCATIONS AND/OR SUPPLEMENTAL SIGNS AND DRUMS SHALL BE LOCATED, RELOCATED, AND/OR PLACED AS THE OPERATIONAL PROCESS MAY NECESSITATE AND/OR AS DIRECTED BY THE ENGINEER.
- SIGNS SHALL BE PLACED IN THE MOST CONSPICUOUS LOCATIONS AS A MEANS FOR BOTH VEHICULAR AND PEDESTRIAN WARNING; HOWEVER, IN NO CASE SHALL ANY SIGN IMPED THE SIGHT LINE NOR INTERFERE WITH EITHER PEDESTRIAN AND/OR VEHICULAR TRAFFIC.
- SPECIALTY SIGNS:**
 - SITE-MADE SIGNS: "BLANKS" ARE TO HAVE LETTERED ON SITE WITH EXTRA LARGE WATER PROOF PERMANENT FELT TIP MARKERS AND ARE TO BE WIRED TO BARRELS AND POSTED AS DIRECTED BY THE ENGINEER. THESE SIGNS ARE ONLY TO BE USED FOR MESSAGES WHICH ARE SITE SPECIFIC. AFTER EACH USE, THE SIGN FIELD IS TO BE CLEANED WITH A SOLVENT AND PLACED AT THE READY.
 - ALTERNATE ROUTE & PROJECT SIGNS ARE TO BE ESTABLISHED AT LEAST TWO WEEKS BEFORE THE COMMENCEMENT OF THE CONSTRUCTION ACTIVITIES, AND ARE TO BE MAINTAINED FOR THE DURATION OF ACTIVITIES WITHIN THAT PARTICULAR PROJECT ZONE.

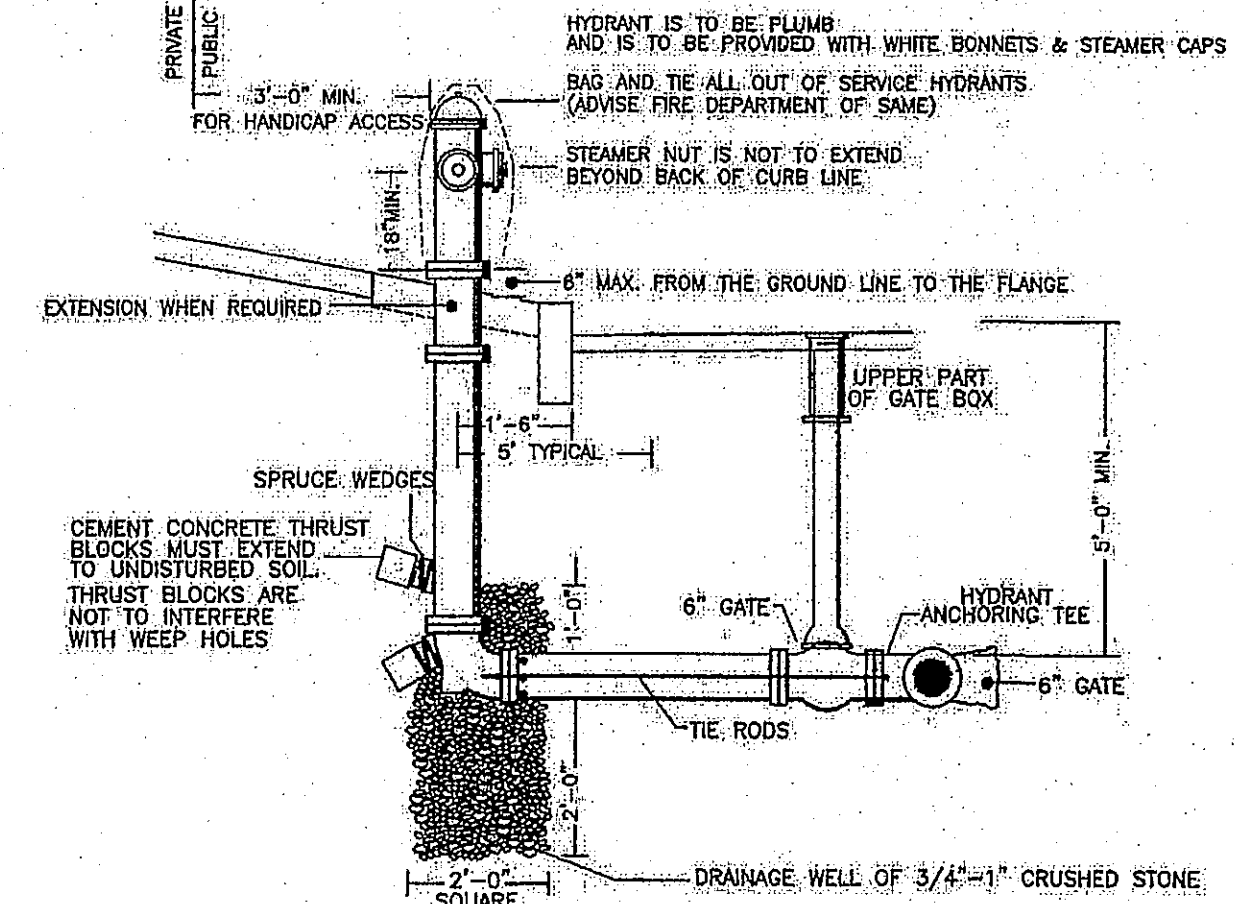


DRUM REQUIREMENTS:

- STANDARD LOGOS NOT SHOWN. QUANTITY & LOCATIONS AS REQUIRED. 'RC' & 'D' TYPE (SEE ACCOMPANYING NOTES REGARDING THESE DEVICES)
- STANDARD TYPE ARE TO COMPLY WITH BOTH THE FOLLOWING DIRECTIVES AND TO THE WRITTEN CONTRACT SPECIFICATIONS:
- THEY ARE TO BE PLASTIC DRUMS, COMPLYING WITH M.U.T.D. AND EQUIPPED WITH OPERATING TYPE 'C' FLASHERS.
 - DRUMS ARE TO BE U.V. RESISTANT, LOW DENSITY, IMPACT RESISTANT POLYETHYLENE.
 - REFLECTORIZED SHEETING IS TO BE OF AN APPROVED ORANGE AND WHITE TYPE IV SHEETING CONFORMING TO M.9.30.0
 - MINIMUM WALL THICKNESS IS TO BE 3/32"
 - MINIMUM DRUM DIAMETER SHALL BE 16"
 - DRUMS SHALL BE APPROXIMATELY 36" IN HEIGHT
 - ALL DRUMS SHALL BE MAINTAINED AND WHEN IT LOSTS ITS TARGET VALUE (INCLUDING DUST BUILD-UP) IT IS TO BE REPLACED.
 - ALL DRUMS ARE TO BE EQUIPPED WITH BASES THAT DO NOT DETACH WHEN THE DRUM IS DRAGGED AND EACH DRUM IS TO BE PROPERLY WEIGHTED TO FULLY RESIST 65 MPH WIND CONDITIONS.
 - ALL DRUMS ARE TO BE MOVED INTO AND OFF OF THE ROADWAY AS NECESSARY AND/OR AS DIRECTED. WHILE FULL SITE REMOVAL WILL BE AT THE DISCRETION OF THE ENGINEER.
 - ONE SIGN IS TO BE PERMANENTLY FASTENED TO THE DRUM.
 - SIGNS ARE TO BE ATTACHED TO THE DRUM WITH 3/8" HEAVY DUTY NUT, BOLT, AND FENDER WASHER FASTENERS WITH A MINIMUM OF FOUR EQUALLY SPACED FASTENERS PER SIGN.
 - THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ESTABLISHING DAILY DETOURS TO THE SATISFACTION OF THE ENGINEER.
- THE 'RC' AND 'D' TYPE DRUM LOCATIONS THAT ARE SHOWN ON THESE PLANS DEPICT THE MINIMUM NUMBER OF RESPECTIVE PERIMETER DRUMS THAT MUST BE INITIALLY PLACED AT THE READY TO CONTROL THE TRAFFIC FOR THAT SECTION OF ROADWAY WHICH IS ACTIVELY UNDER CONSTRUCTION. HOWEVER, THE NUMBER, TYPE & LOCATION OF DRUMS MAY VARY AS THE ENGINEER DEEMS NECESSARY, AND ONLY WHEN THE ENGINEER DIRECTS ARE THESE DRUMS TO BE MOVED TO THEIR NEW 'AT THE READY' LOCATIONS WITHIN THE SAME PROJECT ZONE, AND ONCE RELOCATED THEY ARE NOT TO BE MOVED FROM THAT BE-POSITIONED LOCATION UNTIL DIRECTED TO DO SO.
- AT THE BEGINNING OF EACH WORKDAY, AND/OR AS OTHERWISE DIRECTED THROUGHOUT THE COURSE OF THE WORKDAY, THE CONTRACTOR IS TO ESTABLISH AND MAINTAIN A WELL MARKED DETOUR ROUTE, AND TO FURTHER COORDINATE THIS EFFORT WITH THE ON-SITE POLICE DETAIL. ALL DETOUR ROUTES SHALL TAKE INTO CONSIDERATION BUS STOPS, BUS AND TRUCK TRAFFIC, SCHOOL CROSSINGS, BUSINESS TRAFFIC, ETC., AND ARE TO BE ESTABLISHED SO AS TO HAVE THE LEAST ADVERSE IMPACT ON THE AREA.
- 'RC' & 'D' TYPE ARE TO COMPLY WITH ALL DIRECTIVES LISTED FOR 'STANDARD TYPE' IN ADDITION TO THE FOLLOWING SPECIAL INSTRUCTIONS:
- DRUMS ARE TO BE ESTABLISHED FOR EACH PHASE AT EACH INTERSECTION PER THE ACCOMPANYING LOGOS PLAN, OR AS DIRECTED, AND ARE NOT TO BE REMOVED FROM THE DESIGNATED INTERSECTIONS FOR THE ENTIRE TERM OF THE PHASE BUT ARE TO BE LEFT AT THE READY FOR IMMEDIATE ACCESS AND USE.
 - THE REMOVABLE BOTTOMS OF SUCH DRUMS ARE TO BE PERMANENTLY ATTACHED TO THE DRUM ITSELF SUCH THAT THE BASE WILL NOT SEPARATE FROM THE DRUM WHEN IT IS DRAGGED BUT YET WILL BREAK FREE IF HIT. FASTENERS ARE TO BE LIGHT DUTY, 'TIRE TYPE' WEIGHTS MAY BE USED IN LIEU OF FASTENED BOTTOMS.
 - DRUMS ARE TO BE MOVED INTO AND OFF OF THE ROADWAY AS NECESSARY AND/OR AS DIRECTED. WHILE FULL SITE REMOVAL WILL BE AT THE DISCRETION OF THE ENGINEER.
 - ONE SIGN IS TO BE PERMANENTLY FASTENED TO THE DRUM.
 - SIGNS ARE TO BE ATTACHED TO THE DRUM WITH 3/8" HEAVY DUTY NUT, BOLT, AND FENDER WASHER FASTENERS WITH A MINIMUM OF FOUR EQUALLY SPACED FASTENERS PER SIGN.
 - THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ESTABLISHING DAILY DETOURS TO THE SATISFACTION OF THE ENGINEER.

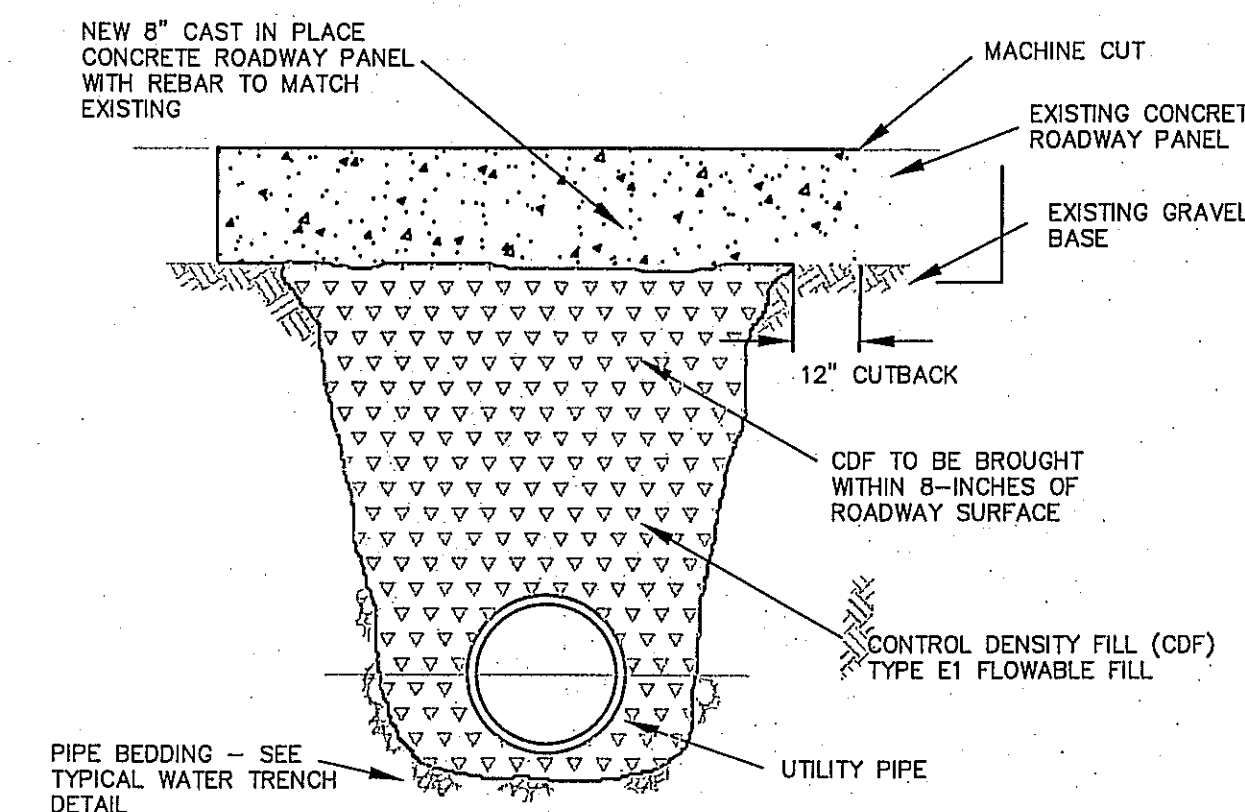


BYPASS, SILL COCK ADAPTOR & BACKFLOW PREVENTER



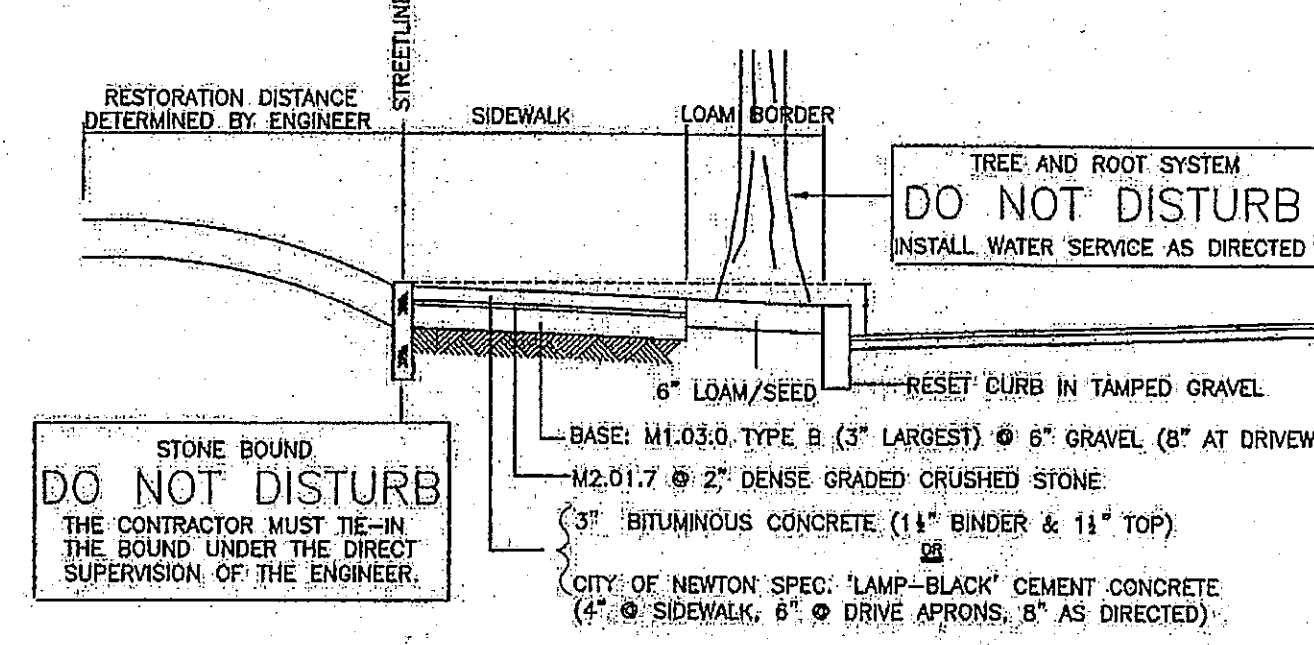
HYDRANT SCHEME

(NOT TO SCALE)



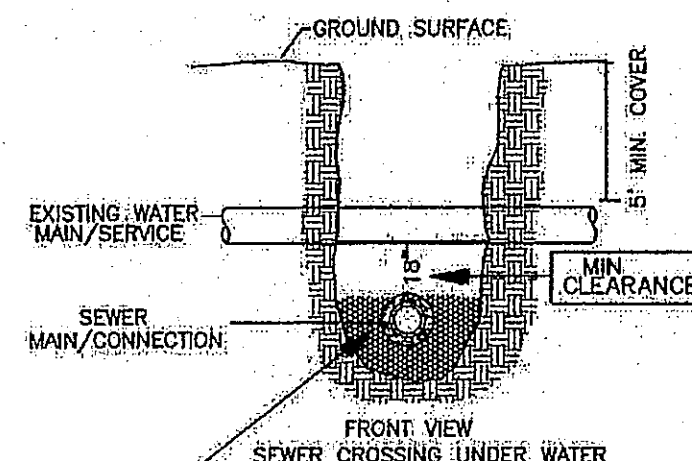
CDF TRENCH - CONCRETE ROADWAY PANEL

SCALE: NONE



TYPICAL CROSS SECTION OF STREETS

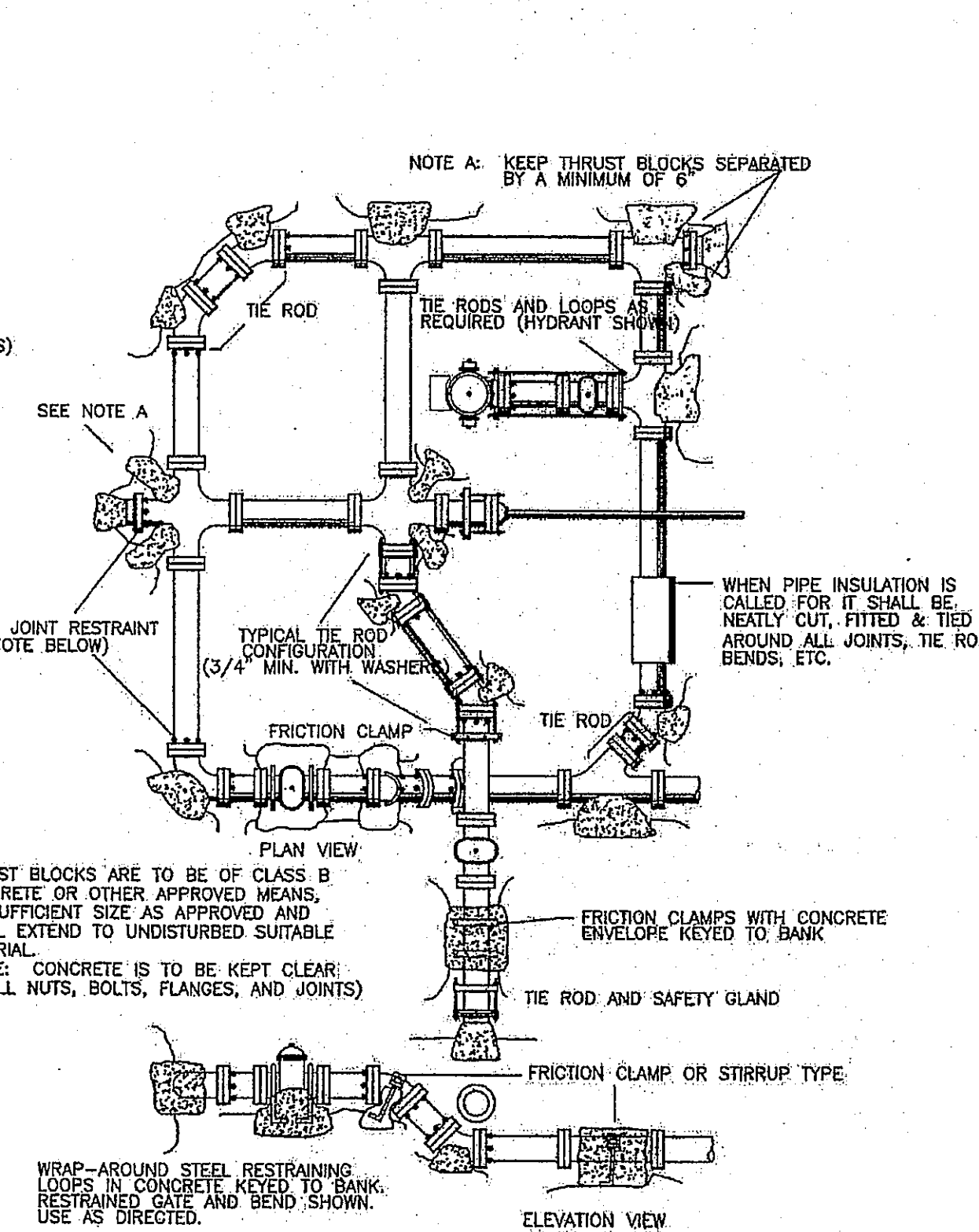
SHOWING ELEMENTS OF RESTORATION



TYPICAL WATER VS. SEWER CROSSING

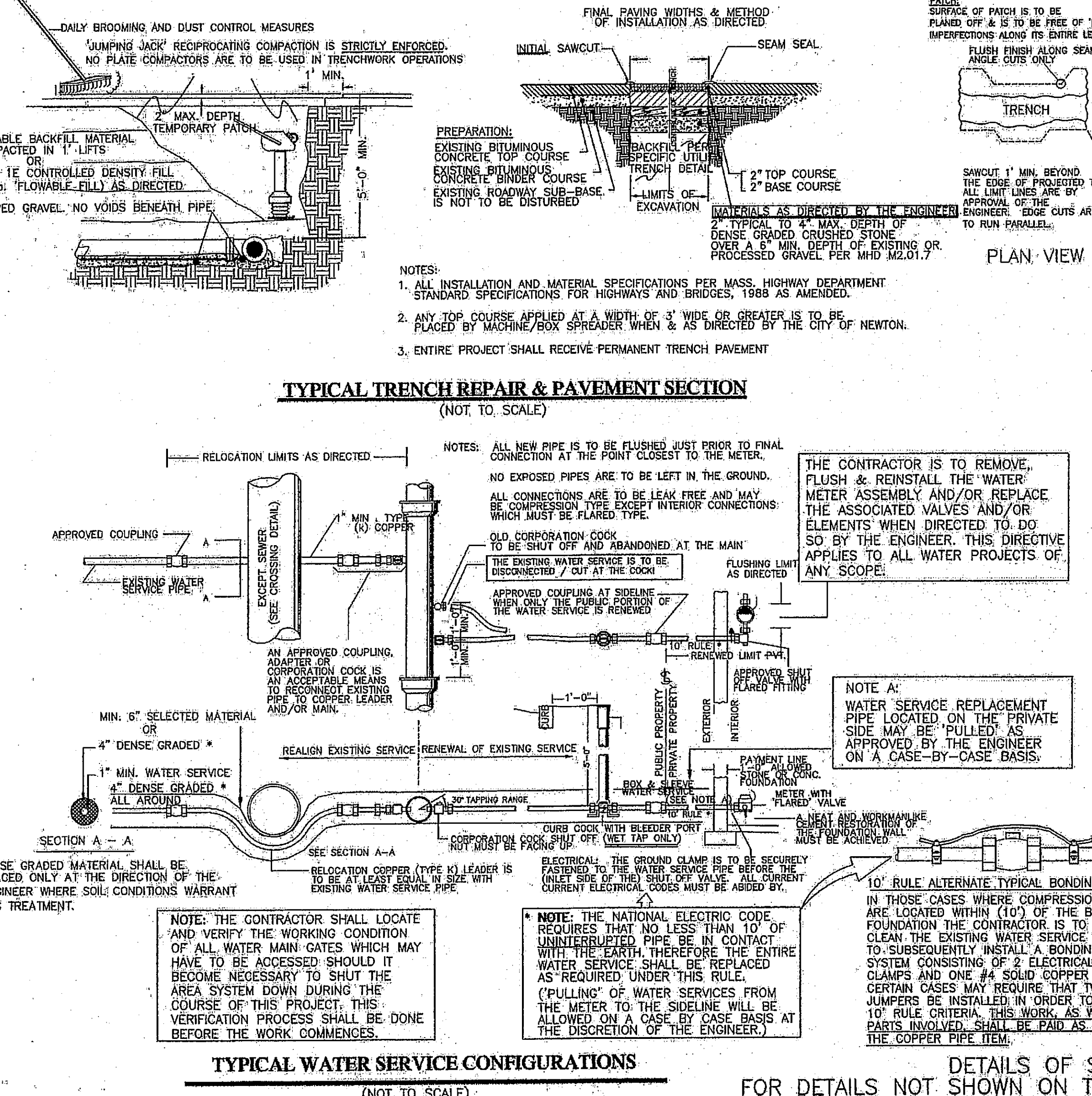
(WORK TO BE PERFORMED AT ENGINEERS DISCRETION ONLY)

(NOT TO SCALE)



TYPICAL THRUST BLOCK CONFIGURATIONS

NOTE: MECHANICAL JOINT RESTRAINING GLANDS ARE TO BE USED AT ALL BENDS IN ADDITION TO THRUST BLOCKS AS SHOWN OR AS OTHERWISE DIRECTED BY THE ENGINEER.



TYPICAL TRENCH REPAIR & PAVEMENT SECTION

(NOT TO SCALE)

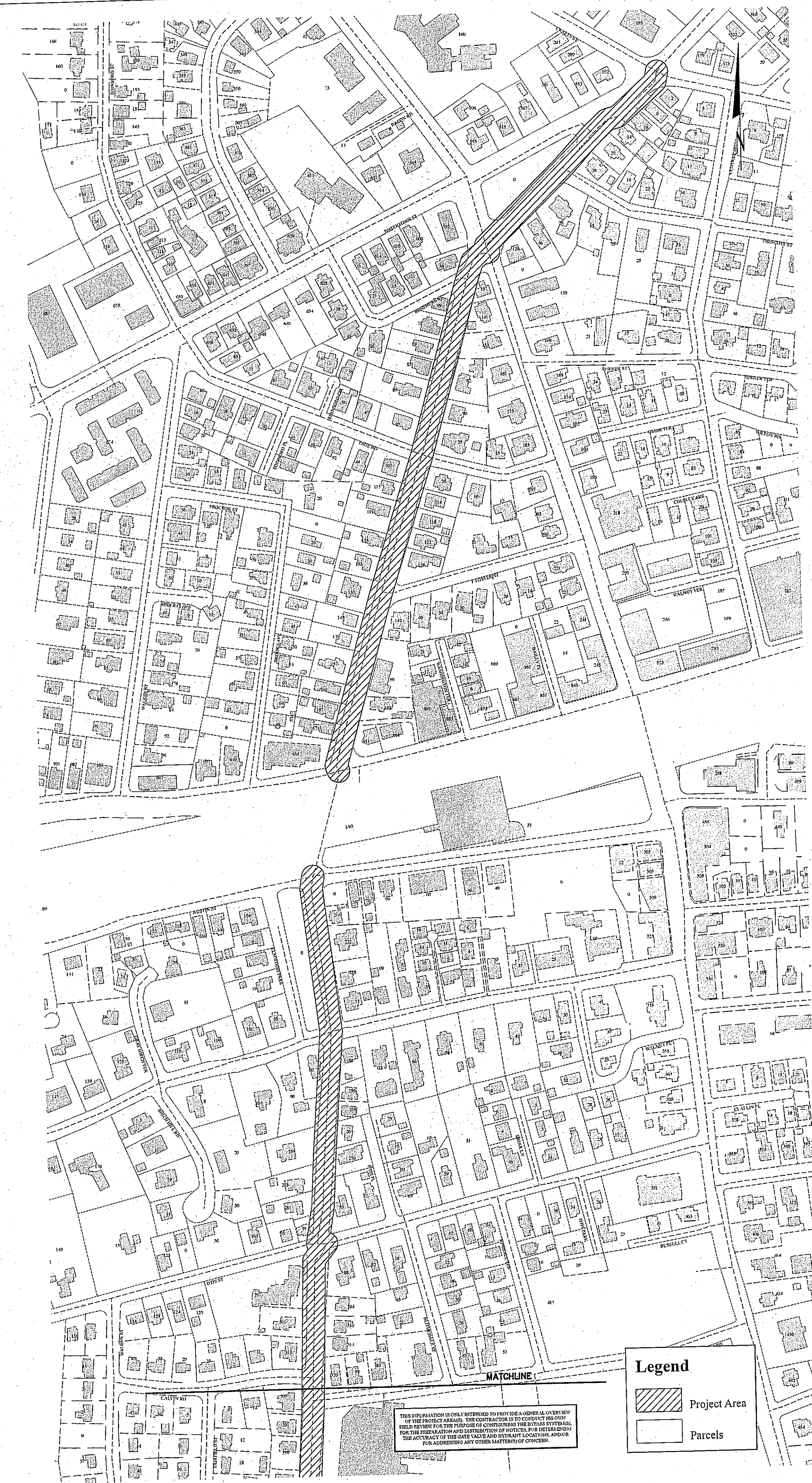
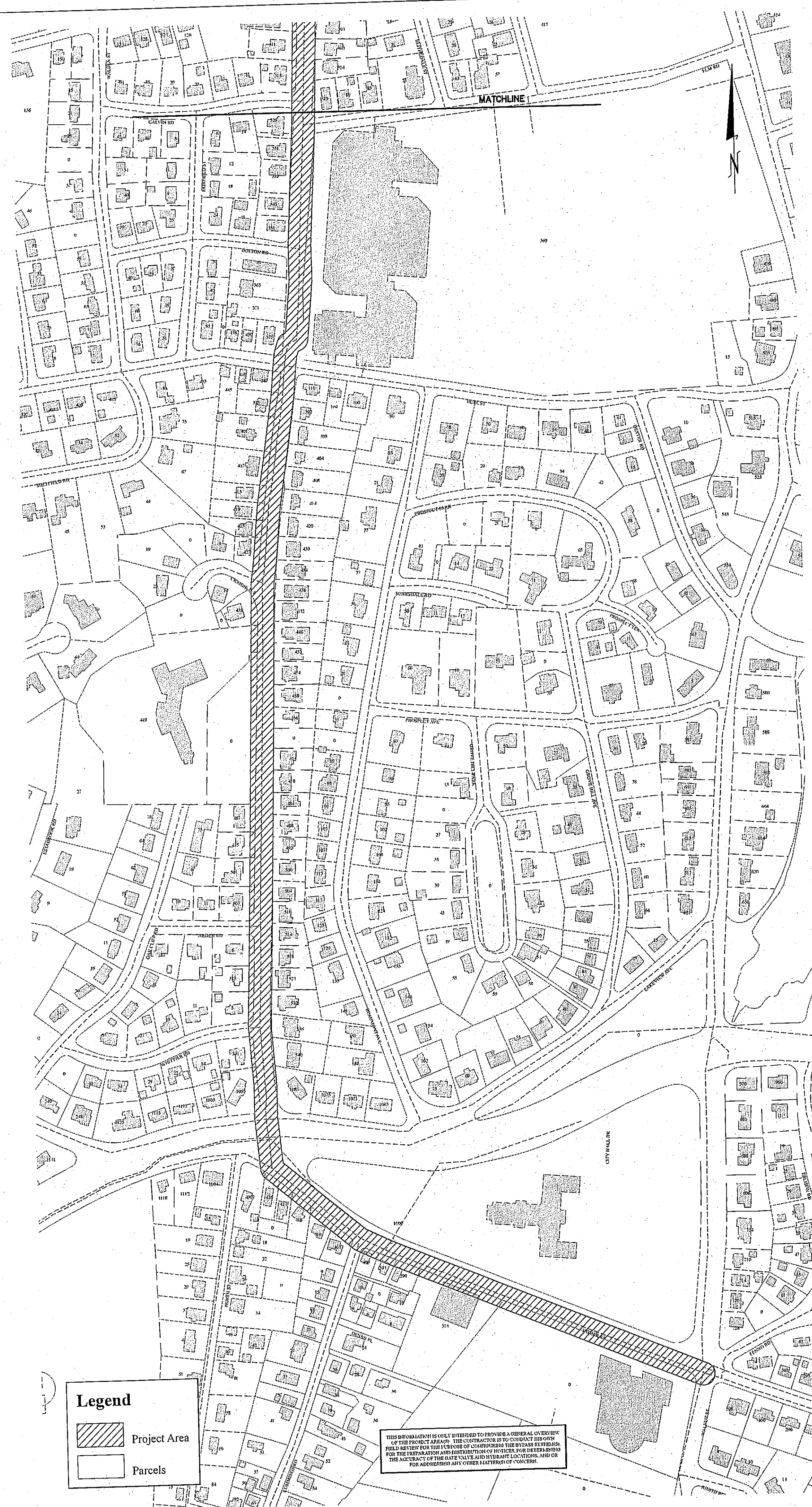
TYPICAL WATER TRENCH

(NOT TO SCALE)

TYPICAL WATER SERVICE CONFIGURATIONS

(NOT TO SCALE)

DETAILS OF SIMILAR TYPE PUBLISHED IN THE 'GENERAL CONSTRUCTION DETAILS' ARE SUPERCEDED BY THE DETAILS SHOWN ON THESE PLANS. FOR DETAILS NOT SHOWN ON THESE PLANS SEE 'CITY OF NEWTON GENERAL CONSTRUCTION DETAILS' WHICH CAN BE OBTAINED AT THE OFFICE OF THE CITY ENGINEER.

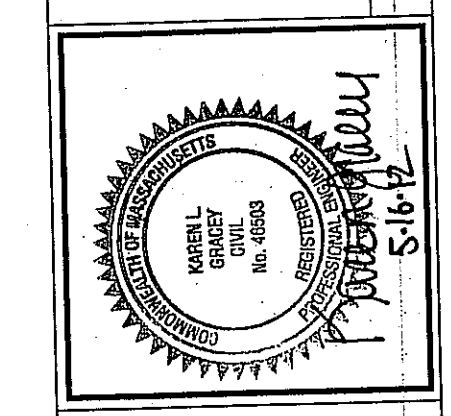


WORK ZONES — ADDITIONAL GIS INFORMATION
SCALE: 1" = 200'

NEWTON, MASSACHUSETTS
WATER MAIN REHABILITATION
AT HOMER STREET AND
LOWELL AVENUE

WORK ZONES
ADDITIONAL GIS
INFORMATION

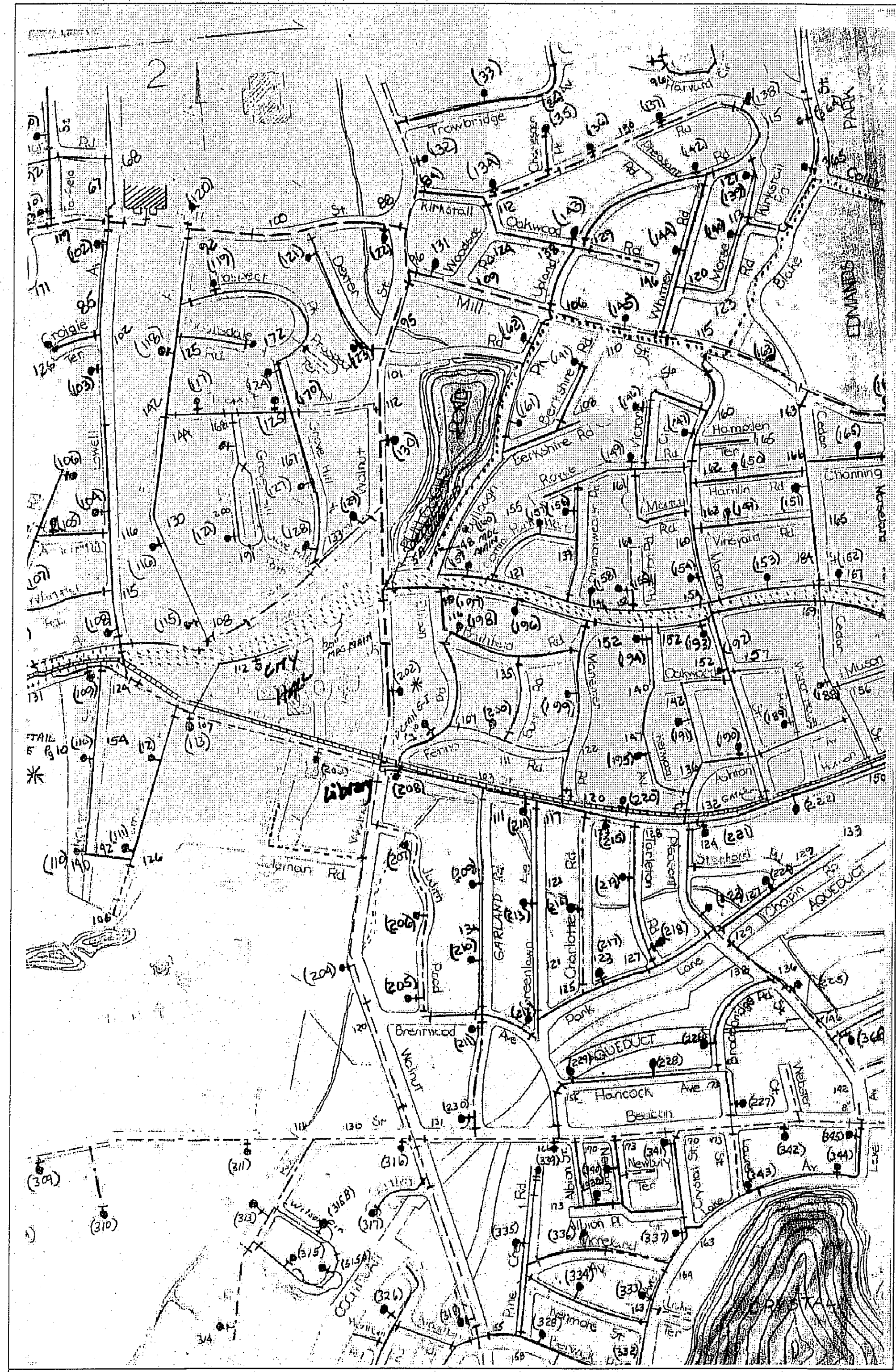
Rev.	Date	Description



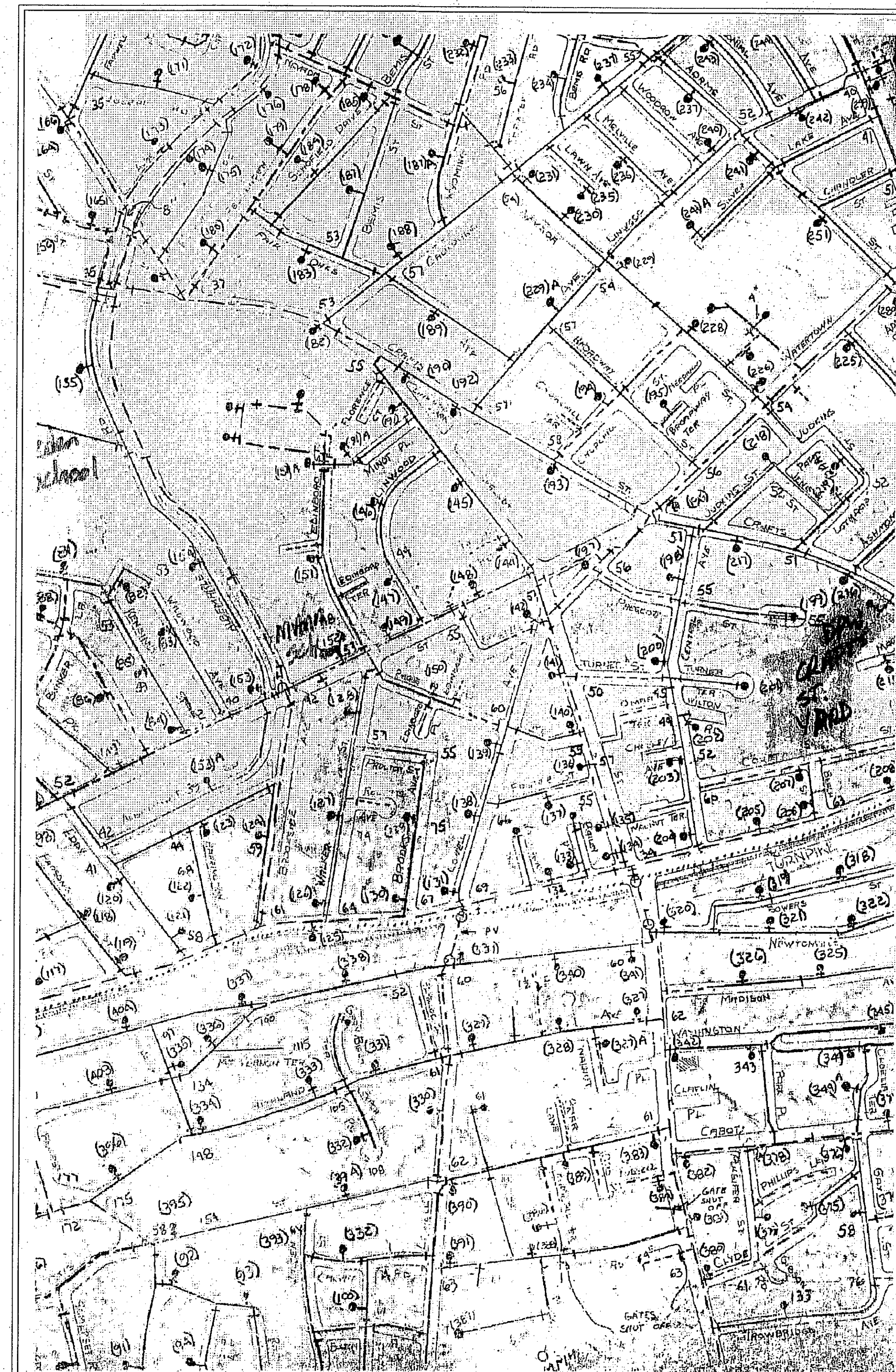
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T&H NO.: 2596
DATE: MAY 2012
SCALE: 1 INCH = 200 FEET
SHEET: 7 OF 8

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ATLAS MAP — HOMER STREET
SCALE: NONE



ATLAS MAP — LOWELL AVENUE
SCALE: NONE

